SERIAL 06103 IGA MOBILE DATA COMPUTERS/COMPUTER AUTOMATED DISPATCH SYSTEM

DATE OF LAST REVISION: August 18, 2006 CONTRACT END DATE: May 18, 2007

CONTRACT PERIOD BEGINNING AUGUST 18, 2006 ENDING MAY 18, 2007

TO: All Departments

FROM: Department of Materials Management

SUBJECT: Contract for **MOBILE DATA COMPUTERS/COMPUTER AUTOMATED DISPATCH SYSTEM**

Attached to this letter is a listing of vendors available to Maricopa County Agencies utilizing the Arizona Department of Public Safety DPS L3-013-001. The using agency and other interested parties may access and electronic version of this contract from the Materials Management Web site at:
http://www.maricopa.gov/materials/Awarded_Contracts/search.asp.

Please note: Price Agreement Purchase Orders (PG documents) may be generated using the information from this list. Use Commodity Code(s) B0700206

All purchases of product(s) listed on the attached pages of this letter are to be obtained from the listed contractor(s).

Offer and Acceptance

SOLICITATION NO.: L3-013

Arizona Department of Public Safety
2102 W. Encanto Blvd., Ste 340
Phoenix, Arizona 85009

OFFER

TO THE STATE OF ARIZONA:

The Undersigned hereby offers and agrees to furnish the material, service or construction in compliance with all terms, conditions, specifications and amendments in the Solicitation and any written exceptions in the offer. Signature also certifies Small Business status.

Arizona Transaction (Sales) Privilege Tax License No.:				For clarification of this offer, contact:	
				Name:	
Federal Employer Identification No.:					
				Phone:	
				Fax:	
Company Name				Signature of Person Authorized to Sign Offer	
Address				Printed Name	
City	State	Zip		Title	

CERTIFICATION

By signature in the Offer section above, the bidder certifies:

The submission of the offer did not involve collusion or other anti-competitive practices.

The bidder shall not discriminate against any employee or applicant for employment in violation of Federal Executive Order 11246, State Executive Order 75.5 or A.R.S. 41-1461 through 1465.

The bidder has not given, offered to give, nor intends to give at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with the submitted offer. Failure to provide a valid signature affirming the stipulations required by this clause shall result in rejection of the offer. Signing the offer with a false statement shall void the offer, any resulting contract and may be subject to legal remedies provided by law.

The bidder certifies that the above referenced organization ___is/___is not a small business with less than 100 employees or has gross revenues of $4 million or less.

ACCEPTANCE OF OFFER

The Offer is hereby accepted.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the solicitation, including all term conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by the State.

This contract shall henceforth be referred to as Contract No. **L3-013-____**. The Contractor has been cautioned not to commence any billable work to provide any material or service under this contract until Contractor receives purchase order, contact release document or written notice to proceed

	State of Arizona Awarded this			**day of**			**02**	
	Procurement Officer							

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(602) 223-2405

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1. INTRODUCTION

The mission of the State of Arizona Department of Public Safety (DPS) is to enforce State laws, deter criminal activity, assure highway and public safety, and provide vital scientific, technical and operational support to other criminal justice agencies in furtherance of the protection of human life and property. The Department consists of four divisions: Highway Patrol, Criminal Investigations, Agency Support and Criminal Justice Support. Together these four divisions provide an immense and extensive range of vital scientific, technical, operational and regulatory services to Arizona residents and to the state's criminal justice community. The Arizona Department of Public Safety, with state headquarters in Phoenix, has offices located in more than 30 communities within Arizona's 15 Counties.

1.1 Project Background

The State of Arizona Department of Public Safety has been operating a Mobile Data Terminal (MDT) system since 1989-90. The Arizona Highway Patrol constructed this system to increase officer productivity. The system has provided wireless data service in the Phoenix and Tucson metropolitan areas as well as the I-10 corridor via four transmitter sites. This system provides both Motor Vehicle Division (MVD) information as well as want/warrant inquiry capability. The current system was designed to support approximately 250 active terminals.

DPS dispatches Highway Patrol officers, CID and other resources from three separate dispatch centers located in Phoenix, Tucson and Flagstaff. DPS does not currently have a bona fide Computer Aided Dispatch system. However, a number of interactive tools have been developed on the State's mainframe computer to assist Dispatchers at all three sites by providing access to ACJIS, NCIC, NLETS, and other applications. Unit recommendations, unit status, incident status, hazard notification, unit availability and other key CAD functions are not currently available.

Replacement of the existing Mobile Data System has been deemed necessary by the department. It is necessary due to several factors. The primary factors are as follows:

- System manufacturer no longer in business
- Age of the existing Mobile Data System
- Lack of replacement parts for the Mobile Data System
- Lack of complex graphics support in the vehicle and at the dispatch facility
- Inability to fully integrate with a state of the art Computer Aided Dispatch (CAD) system
- Inability of system to support additional traffic associated with newer applications
- Inability to expand the system to provide larger service area

Furthermore, the department has decided that the automation of the existing dispatch processes is necessary due to several factors. The primary factors are as follows:

- Desire to automate current processes
- Reduce response time for calls for service
- Provide more automated oversight of resources
- More fully exploit the efficiencies of a Mobile Data System

In furthering its vision of being a national model in providing ethical, effective, efficient, and customer-oriented state-level law enforcement services, the State has embarked on a project to modernize its dispatching and Mobile Data Systems. This Request for Proposals, with the subsequent system selection and implementation is the culminating effort of this project.

1.2 Approach

A detailed needs analysis was conducted to identify the specific requirements of the State. These requirements have been reviewed and prioritized by the State and incorporated into this RFP. Offerors are invited to provide systems that fully meet the identified requirements of the State. The State, with the assistance of its consultants, will review and rank proposals submitted in response to this RFP. The State will identify and negotiate a contract with the highest ranked Offerors. Implementation of the selected system is expected to proceed immediately after the contract is finalized.

1.3 Project Scope

The State desires to procure a Mobile Data Computer System (MDCS) and a Computer Aided Dispatch (CAD) system. The Computer Aided Dispatching system will initially serve the dispatching requirements of the Phoenix and Tucson dispatch centers, with eventual service provided to the Flagstaff dispatch center. In addition to the three dispatch centers, the new CAD system will also provide intercommunications (messaging) between all MDCS users and the dispatch facilities and fulfill the dispatching requirements of several smaller agencies that may contract for dispatch services in the future.

The State is seeking to procure highly available, reliable, user friendly, and powerful Public Safety System solutions, which will meet the current and future needs of the State, the Arizona DPS and agencies contracting with the State for mobile computer data and dispatch services. The Computer Aided Dispatching (CAD), Mobile Data Computer System (MDCS), and Automatic Vehicle Location (AVL) systems shall be proven and established solutions that are operational and fully accepted in similar configurations. The State requires that at least three other comparable systems be referenced in the Offeror's response. Each of the Offered systems should embrace the opportunity and ability to support requirements through expansions instead of total systems replacement. The Management Information (reporting) Components of the Offered Systems shall utilize relational database technology, be user

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friendly, and provide an extensive reporting facility for the production of both "defined pre-programmed" and "ad-hoc" reports.

The State desires to procure replacement systems for their current Mobile Data Terminal (MDT) system and to procure Computer Aided Dispatch (CAD) and Mobile Data Computer System (MDCS) that are fully integrated and that have proven interfaces to 9-1-1, ACJIS and NCIC/NLETS. Due to the nature of the States operating procedures, interfaces must be created/included in the Offered systems to several in-house mainframe applications. The elimination of duplicate/redundant data entry is one of the main goals of this procurement.

The State reserves the right to purchase the best price-performance system, which may not necessarily be the lowest priced system. A completely customized system is not desirable. The State would rather select an off-the-shelf system that can be tailored through tables and parameters to meet the requirements specified in this RFP.

1.4 Project Milestones

RFP Publish Date	November 14, 2002
Pre-Proposal Conference	November 27, 2002
Offeror Questions Deadline	December 06, 2002
State Response to Bidders	December 13, 2002
Proposals Due Date	January 03, 2003
Short List Announced	February 03, 2003
Short Listed Offeror Orals	February 18-20, 2003
Offeror Recommendation	February 27, 2003
Contract Negation Completed	March 14, 2003
System Acceptance Date:	August 29, 2003

1.5 Request for Proposal

This Request for Proposal (RFP) defines the performance requirements for a turnkey data communications system (System). The Offeror will be responsible for ensuring that the System is operational and ready to use in conformance with the requirements described in this RFP. The System shall consist of, at a minimum, the following subsystems and components:

A. A Computer Aided Dispatch System with an integrated Tactical Map Display (TMD) subsystem for use by the Phoenix and Tucson dispatch facilities; with a separately priced option for the Flagstaff dispatch facility. The CAD system shall efficiently

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interface with the new Mobile Data Computer System and with various other State systems.

B. Mobile Data Computer System.
C. Optional Automated Vehicle Location (AVL) System.
D. A seamless interface to the E9-1-1 subsystem.
E. An ADA-compliant seamless interface of TDD calls, via E9-1-1 or administrative lines, to the CAD system.
F. A CAD and MDCS interface to Arizona Criminal Justice Information System (ACJIS), NLETS and NCIC systems, which must be NCIC-2000 compliant.
G. All hardware, firmware, and software must be installed and must perform in accordance with the requirements of this RFP.

1.6 Other Agencies within the State

An important criteria during the evaluation and selection process for all components of the system will be the perceived ability to develop partnerships with other agencies within the State to utilize and expand this system. The ability to which the Offeror and the system can support this growth concept will factor heavily during the evaluation process. Both large and small agencies within the State are closely monitoring this project to determine if it will provide a viable alternative to developing independent solutions. Wherever applicable, the Offeror should highlight capabilities of the offer that would be a direct benefit to these plans.

Other agencies will contract directly with the Offeror for the required system interface to meet their specific needs.

1.6.1 ADD-OPTION (Maricopa County):

Maricopa County may wish to participate with the State in its Phase 1 procurement to meet the County's needs. The County's requirement is for 600 additional mobile terminal users employed by and operating within the boundaries of Maricopa County. The Offeror will be initially required to interface a PRC text based CAD system, and later, a New World Systems mobile computing application for Records Management (RMS). These will be separately priced options.

The Offeror shall describe any installed and currently-supported systems that successfully connect multiple agencies, using a variety of CAD/RMS software, to a single CAD/MDCS hardware infrastructure.

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2. CURRENT OPERATIONS

A paragraph-by-paragraph response shall be provided indicating compliance with the specifications and details provided in this section of the RFP. If the Offeror takes exception to a specific paragraph, they shall fully describe their exception in the appropriate section of the proposal.

2.1 Computer Aided Dispatch (CAD)

The Arizona Department of Public Safety (DPS) has responsibility for a number of dispatching functions in the State including:

- Receiving and processing calls for service from the public that occur within the Arizona Highway Patrol's (AZHP) area of jurisdiction.
- Collecting detailed call information for reported incidents.
- Dispatching AZHP officers to reported incidents.
- Monitoring the activities of AZHP officers.
- Assisting local jurisdictions by assigning and monitoring the activities of AZHP officers in local incidents and special task forces such as Gang Intelligence Team Enforcement Mission (GITEM) and Vehicle Theft Interdiction (VTI).
- Assisting the Criminal Investigation Division, by monitoring and dispatching officers as needed for criminal case activities.
- Providing a coordination effort for deploying the State's Helicopter resources for medical and investigative purposes.

The Operations Communications section (OPCOMM) accomplishes these dispatching tasks from three separate dispatch centers located in Phoenix, Tucson and Flagstaff. The Offered CAD system will initially be implemented in the Phoenix and Tucson Dispatch Centers with the eventual goal of implementing the Offered CAD system in each of the three dispatch centers.

2.1.1 Overview of Existing Operations

The Arizona Department of Public Safety has three dispatch centers: one in Phoenix, one in Tucson and one in Flagstaff. Operational Communications (OPCOMM) personnel staff the three dispatch centers and perform the required call taking, dispatching and records keeping activities.

The geographic area, in which OPCOMM personnel monitor and dispatch resources (Helicopters, Highway Patrol Officers, Criminal Investigations Division Officers, etc.), encompasses the entire State of Arizona. A complex network of towers and channel frequencies are required to provide the required radio communications for DPS's area of responsibility. The Telecommunications Bureau of the State supports and maintains the Radio Frequency (RF) systems used by OPCOMM personnel in the three dispatch centers as required.

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DPS does not have a CAD or records management system (RMS) implemented in any of the three dispatch centers. However, custom applications have been developed on DPS's mainframe computer to assist the Department's dispatching and records management activities and to provide access to various state and national databases and applications. These applications have primarily been developed in house by the Information Technology Section. Systems Software Analysts, Systems analysts, Applications Systems Analysts and Engineers maintain and modify the mainframe applications and networks used by OPCOMM.

2.1.2 Current Staffing Levels and Dispatch Workstations

The three dispatch centers are staffed by OPCOMM on a 24-hour basis, 365 days of the year. Table 1 – Operations Communications – Shift Schedules and Staffing Levels shows the shift schedules and staffing levels for the three dispatch centers. The table indicates the typical number of positions that are manned on a daily basis, rather then the number of personnel employed for the positions.

Table 1 – Operations Communications – Shift Schedules and Staffing Levels

Shift	Starting Time	Ending Time	Number of Call Taker Positions	Number of Dispatch & Combined Positions*	Number of Supervisors	Total
Phoenix						
Graveyard	22:30	06:30	1	4	1	6
Day shift	06:30	14:30	3	5 or 6	2	10 or 11
Swing shift	14:30	22:30	2	5 or 6	1	8 or 9
Tucson						
Graveyard	23:00	7:00	0	2 or 3	1**	3 or 4
Day Shift	07:00	15:00	2	5	2	9
Swing shift	15:00	23:00	0	5	1	6
Flagstaff						
Graveyard	2230	0630	0	2 or 3	1	3 or 4
Day Shift	0630	1430	1	4	1	6
Swing shift	1430	2230	1	4	1	6

* Combined positions act as both Call Takers and Dispatchers

** In Tucson, the same Supervisor works both the Swing and Graveyard shift. The Supervisor is there for only a few hours of the Graveyard shift

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Table 2 – CAD Workstations by Type, below, indicates the total number of CAD Workstations that must be included in the proposal at each dispatch center by type. Each of the workstations would be accessing the CAD system to perform the indicated functions.

Table 2 – CAD Workstations by Type

Dispatch Center	Call taker Workstations*	Dispatch/Supervisor Workstations**	Administrative Workstations***
Phoenix	5	10	2
Tucson	3	6	1
Flagstaff	2	6	1

* Includes all E9-1-1 positions plus a workstation for each switchboard/receptionist in Phoenix and Tucson
** Includes all radio positions plus a separate workstation in the Supervisor's office
*** For system maintenance and report production

2.1.3 Transaction Volumes

Table 3 – Dispatch Center Statistics, below, indicates the dispatch-related transaction volumes. Some of the data fields are missing or estimated due to a lack of automated reporting capabilities.

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Table 3 – Dispatch Center Statistics

Parameter/Statistic:	Phoenix		Tucson		Flagstaff		Total1	
	2000 Actual	2001 Est.	2000 Actual	2001 Est.	2000 Actual	2001 Est.	2000 Actual	2001 Est.
Total number of emergency telephone calls	116,732	123,376	14,839	51,972	--	33,603	131,571	208,951
Total number of administrative telephone calls	372,606	482,922	266,189	278,576	--	143,292	638,795	904,790
Total number of Calls for service	101,402	105,715	46,768	54,350	--	41,878	148,170	201,943
Total number of Case Reports processed	26,675	28,514	16,975	17,500	--	9473	43,650	55,487
Total number of ACJIS/NCIC queries	573,876	600,289	405,120	425,212	--	380,253	978,996	1,405,754
Total number of traffic accidents	--	--	--	--	--	--	26,695	27,595
Peak number of emergency telephone calls received per hour	--	--	29	45	--	30	29	75
Peak number of administrative telephone call received per hour	--	--	3	6	--	19	3	25
Peak number of Calls for Service received per hour	--	128	23	30	--	25	23	183
Peak number of case reports issued per hour	--	--	--	--	--	12	87	86
Peak number of ACJIS/NCIC queries per hour	--	135	--	90	--	76	--	301
Peak number of traffic accidents per hour	--	--	--	--	--	--	6	6
Busiest day of the week	--	Thrs/Fri	--	Friday	--	Friday	Friday	Thursday
Busiest shift of the day	--	12:00 to 20:00	--	13:00 to 18:00	--	13:00 to 18:00	--	13:00 to 18:00

1 Due to missing-data, the totals may not be an accurate reflection of the activity in all three centers.

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2.1.4 Current Dispatch Procedures – Phoenix

The Phoenix Dispatch Center dispatches resources for four Highway Patrol Districts (District 11, Metro Central, Metro East and Metro West), CID, and Emergency Medical System Communications (EMSCOM). Typically, one Dispatcher is assigned to each of the four districts and one Dispatcher is assigned to cover EMSCOM. The dispatch center has nine radio positions: two for EMSCOM, one for each District (total of four), two backup positions and one Supervisor. There are four Call Taker (E9-1-1) positions and the switchboard operator also acts as a Call Taker.

2.1.4.1 Call Taking

Calls enter the dispatch center in one of five ways:

A. Main Highway Patrol telephone number (223-2000) – Telephone calls to this number are answered by the switchboard Monday through Friday from 8:00 to 16:00. Remainder of the time, the main number is answered by either Call Takers or Dispatchers on duty. The switchboard operator can act as a Call Taker and often enters incidents into the system.

B. Transfer of calls from various PSAPs in their dispatch area – The Phoenix dispatch center is a secondary PSAP for any incidents that occur on State Routes, Freeways, Interstates and access ramps to State Routes, Freeways and Interstates.

C. Line 9530 – Ring down from Gila County Sheriff's Department. Calls are transferred to the Dispatch Center for any incidents within Gila County that are located on State Routes, Freeways, Interstates or on and off ramps for these roads.

D. Ring Down/Hot lines – Ring down lines are located in the dispatch center for transferring calls from Phoenix PD, Phoenix Fire Department, Maricopa County Sheriff's Department and Rural Metro Fire Department. Again, incidents occurring on state routes, interstates, freeways and access ramps to these roads are transferred to DPS.

E. Field initiated events – Highway Patrol officers report incidents that they happen upon and those calls are monitored by dispatch center staff. Backup requests from officers are also monitored by Dispatchers. The field personnel (e.g., road crews, radio technicians, etc.) also report incidents that they happen upon via radio communications with Dispatchers. The Cities of Chandler and Glendale occasionally report incidents to the Dispatchers via radio communications.

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Ninety Five percent (95%) of the 9-1-1 calls received and handled by the Phoenix dispatch center originate on cellular phones. The overwhelming majority of the calls processed by the Dispatch Center occur on roads, freeways, interstates and access ramps. Therefore, addresses are not used very often to locate incidents. Mileposts, overpasses, exit/entry names and distances from them are the predominate methods used to locate incidents.

Any EMS related calls that arrive at the dispatch center are immediately transferred to the appropriate Fire/EMS agency and, when appropriate, law enforcement agencies (e.g., Phoenix Fire Department, Phoenix Police Department, Maricopa County Sheriff's Department, Rural Metro Fire Department, etc.).

Calls are categorized into the following types:

- Accidents/Collisions
- Disabled vehicles
- Debris on roadway
- Pedestrians on roadway
- Animals on roadway

2.1.4.2 Call Handling

Calls from the public are answered by Call Takers, Dispatchers and the front desk/switch board operator. No matter how the call is answered, the Call Takers must manually determine and assign a district to the incident based on the call's location. If a response is needed, the person answering the call fills out an incident card (see Figure 1 and Figure 2 below). The incident card is carried by the person filling it out to the appropriate dispatch position and either handed to the Dispatcher or placed in their bins.

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Figure 1 – Front of Incident Card

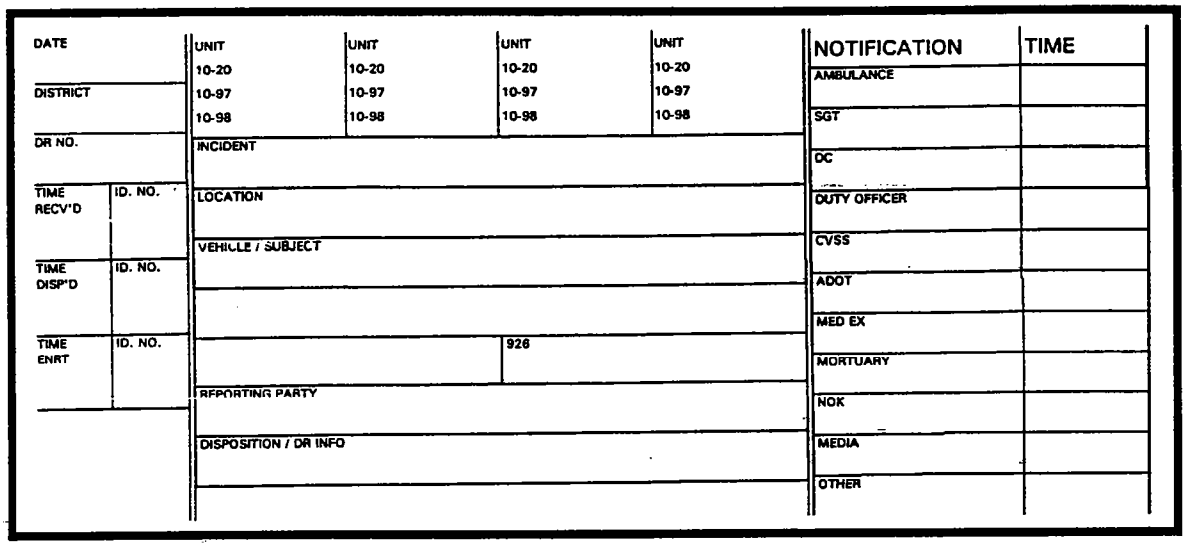
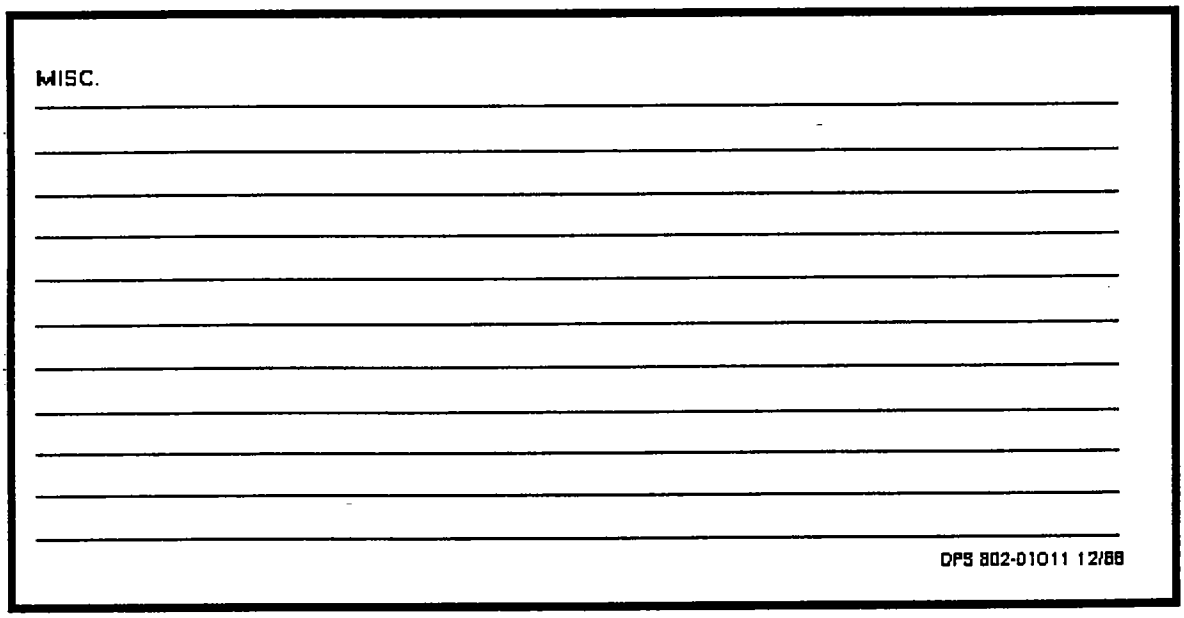


Figure 2 – Back of Incident Card



Dispatchers broadcast the information contained on the incident card to all vehicles in the assigned patrol district. Units typically assign themselves to the calls. Dispatchers rarely "dispatch" or assign resources to a specific call. The controlling Dispatcher monitors the call and manually records on the incident card the times units go en route, arrive on scene, etc. Any special situations are also recorded on the card (see Figure 2 – Back of Incident Card, above).

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2.1.4.3 Resources

Typically, there are between 15 and 30 units on duty and under the responsibility of each Dispatcher. Usually no more then 50 units are handled by any one Dispatcher. The maximum number of units handled at any one time in the dispatch center is 120 units.

2.1.4.4 Unit Status

Dispatchers use a combination of a green/red light system and status sheets to keep track of unit activity. Dispatchers are required to record all of their units' activities on the status sheets. However, not all of the activity can be recorded since the Dispatchers are often too busy to dispatch and record unit activity. The status sheets are primarily used as an aid to the Dispatchers to document where their units are in case they need to send backup or get a hold of them.

The green and red light system is used by Dispatchers to manually maintain the status of units under their control. A green light indicates that the unit is available and a red light indicates that the unit is working a call or otherwise not available for dispatch. The lights are manually changed by using a toggle switch. By looking for a unit with a green light next to it, the Dispatcher can quickly find which units are available to work specific calls.

Activity associated with a specific incident is annotated on the incident's cards.

2.1.4.5 Emergency Medical System Communications (EMSCOM)

Dispatchers assigned to this position track helicopter (life flight and investigative assistance) activity. They assign the closest available helicopter to the scene of an incident. Helicopters are requested via field-initiated events or at the request of other agencies. A computerized entry screen (provided by EMSCOM) is available for obtaining mission numbers unique to EMSCOM. The helicopter is notified either by calling the company or directly via radio communications.

2.1.5 Current Dispatch Procedures – Tucson

The Tucson Dispatch Center dispatches resources for four Highway Patrol Districts (Districts 4, 6, 8 and 9) plus CID. One Dispatcher is typically dedicated to each district and CID resulting in a total of five dispatch positions. In addition to the five dispatch positions, two Call Taker (or backup) positions are also located in the Tucson dispatch center. As in Phoenix, the front desk receptionist answers emergency calls, when on duty.

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2.1.5.1 Call Taking

Calls enter the Tucson dispatch center as transfers from PSAPs, through ring down lines or via calls to the Dispatch Center's switchboard operator/receptionist.

Typically, there are two Call Takers and five Dispatchers plus a Supervisor on duty during the day/swing shift in Tucson. Both Call takers and Dispatchers answer calls. Both fill out incident cards and hand them to the appropriate Dispatcher. The front desk receptionist (switchboard operator) answers calls but unlike Phoenix, does not fill out incident cards. The receptionist only routes the calls to the appropriate Dispatcher.

2.1.5.2 Call Handling

Tucson uses incident cards and status sheets (long form) to record incident information and unit activity.

As in Phoenix, Tucson Dispatchers typically broadcast the information contained on the incident card to all vehicles in the incident's patrol district. Units then assign themselves to the call. In district 8, units are occasionally assigned to calls by the Dispatcher. This occurs when only one unit is available in the district or if a unit recently responded to a call near the new call.

2.1.5.3 Resources

A typical compliment of units under the control of a Dispatcher includes:

A. 20 Highway Patrol units
B. 16 miscellaneous units
C. 4 administrative units
D. 4 K-nine units
E. 3 Construction units (working areas of construction on the freeways)
F. 1 helicopter unit
G. Commercial Vehicle Inspectors – number varies
H. Vehicle Theft Interdiction (VTI) units – number varies

2.1.5.4 Unit Status

Tucson Dispatchers maintain unit status sheets rather then the green, red light system available in Phoenix.

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2.1.6 Current Dispatch Procedures – Flagstaff

The Flagstaff Dispatch Center dispatches resources for four Highway Patrol Districts (Districts 1, 2, 3 and 12) plus CID. One Dispatcher is typically dedicated to each district and CID resulting in a total of five dispatch positions. In addition to the five dispatch positions, two Call Taker (or backup) positions are also available.

Flagstaff dispatch procedures are structured similarly to Phoenix and Tucson.

Flagstaff does assign units to calls in certain geographic areas.

2.1.7 Dispatch Procedures Common to the Three Dispatch Centers

2.1.7.1 Resources

The following types of resources are monitored and dispatched by the dispatch centers:

A. Highway Patrol officers – dispatched or self-dispatched to incidents occurring on state routes, interstates, freeways and access ramps. Patrol within assigned districts. The IDs for Highway patrol units are composed of the district ID, Squad ID and Individual number. One field sergeant typically supervises up to nine patrol officers. A Metro unit ID is composed of the District ID, area of town and Person ID (e.g., 1C2).

B. Criminal Investigation Detectives (CID) – can go anywhere within the Phoenix dispatch center's area of responsibility. CID personnel are not just limited to interstates, freeways, state routes and access ramps. Full addresses are required to locate incidents and locations being investigated by CID.

C. GITEM – dispatched to calls potentially involving gang members. Also, perform investigations and assist in gang interdiction operations. GITEM officers are usually part of CID and like other CID officers, they can operate and are dispatched to incidents located anywhere within the dispatch center's area of responsibility. Full addresses are required to locate incidents and locations being investigated by GITEM task force members.

D. Vehicle Theft Interdiction (VTI) units – deal with auto theft and theft deterrent operations. Can also operate and be dispatched anywhere in the dispatch center's area of responsibility.

E. Other Resources – a number of other resource types are dispatched/monitored in the dispatch center. For example, service units patrol the highways looking for stranded motorists. Volunteers staff the service unit vehicles. They are not law enforcement officers. The service units may occasionally come upon potentially dangerous

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situations. For this reason, dispatch regularly performs welfare checks on them.

All of these resources are logged on and off duty by their controlling Dispatchers. The units are required to notify Dispatch of their locations and activities. Dispatchers manually record their statuses and activities on status sheets. Welfare checks are required for all resources, not just Highway Patrol officers.

Automated procedures for tracking officer activity and/or incident status are not currently available in any of the three dispatch centers.

Officers are normally assigned to cover squads within a specific patrol district. Typically, there are 5 to 6 squads per district. Units are labeled based on their district, squad and unit number. For example a unit label of 822 means that the unit is in District 8, squad 2 and is the second unit within that squad.

2.1.7.2 Welfare Checks

Dispatchers are required to check the whereabouts and well being of the patrol officers that they are monitoring throughout their duty shifts. During daylight hours, Dispatchers must perform a welfare check on each of their officers every 60 minutes. During nighttime hours, the welfare check must be performed every 30 minutes.

Automated triggers to remind the Dispatchers to perform the required checks do not currently exist, but are highly desirable in the Offered CAD system.

2.1.7.3 Department report number (DR Number) Assignment

A department report number must be obtained for all incidents requiring a report. A mainframe process is available for assigning the next sequential department report number. Dispatchers typically obtain the DR number for the officer writing the report by entering the officer's name, incident number and location. Once the case/DR number is obtained from the mainframe, the Dispatcher transmits it to the officer via voice radio communications and manually records it on the incident card.

2.1.7.3.1 Other Duties

Dispatchers run plates and licenses at the request of units and relay the information back to the Highway Patrol officers via voice radio communications.

All abandoned vehicle tows are entered into Department Automated Report Tracking System (DART). Dispatchers occasionally have to search paper logs if they do not have the VIN/Plate number of towed vehicles.

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Dispatchers and Call Takers enter the following types of information into ACJIS:

- Abandoned Vehicles
- Injured/deceased individual involved in accidents
- Overdue/separated individuals

A wrecker rotation list must be consulted to assign wreckers to incidents.

Ambulance companies are pre-assigned to cover geographic areas. If an ambulance is needed, the pre-assigned ambulance company for the area of the incident is notified by the Dispatcher unless the victim requests a specific company.

Officers, specialized resources and Supervisors are notified of certain incidents via paging. Paging over commercial networks is utilized for the notifications. Standard Motorola paging is also used on a DPS network.

Dispatchers and call takers monitor security alarm panels.

OPCOMM personnel must telephone various individuals as part of their job function. A computerized mainframe system provides a phone list, which is available to assist in locating the telephone and/or pager numbers of specific individuals/agencies. The phone list is manually maintained in each dispatch center. Search capabilities are limited to:

- Alphabetic searches
- Names must be spelled exactly to obtain a match.

2.1.8 System Interfaces

The following interfaces currently exist at the three dispatch centers:

2.1.8.1 E-9-1-1 Interface

All three dispatch centers are set up to receive E9-1-1 calls transferred from primary PSAPs. All three dispatch centers are secondary PSAPs and are set up with E9-1-1 controllers to receive and display transferred E9-1-1 calls.

2.1.8.2 Emergency Medical Services Communication (EMED)

This on-line mainframe system is used by Phoenix OPCOMM personnel to record all ambulance calls patched through the communications facilities. Information about each call (i.e. date, time, location) is recorded through on-line terminal entry.

2.1.8.3 ACJIS/NCIC/NLETS and Mainframe Application Programs Interface

OPCOMM personnel routinely access ACJIS, NCIC, NLETS, and local criminal justice information systems through terminals connected to the HDS Ex-80 Mainframe to IBM Z800 Mainframe.

3270 terminals located at the three dispatch centers are currently used to access both ACJIS and the various mainframe applications described below. A terminal controller, located on the network between the 3270 terminals and the mainframe, routes asynchronous data to ACJIS applications and synchronous data to the MIS applications.

In the Offered system, the State prefers that access to ACJIS and most mainframe MIS applications be accomplished through MQ Series middleware, utilizing the TCP/IP protocol. Also supported is a DPS-written TCP/IP sockets interface. Some of the MIS applications in the offered CAD system, however, will continue to be accessed through 3270 terminal emulation.

The State uses a message switch purchased from IBM in 1988 to manage data within ACJIS and between the various applications and databases that make up the state's criminal justice system. The message switch handles data originating from law enforcement agencies throughout the state. This message switch performs functions independent of the dispatching requirements. The message switch will not be replaced as part of the new CAD system's implementation. The new CAD system will have to interface with the switch to access ACJIS and NCIC/NLETS.

2.1.8.4 Palo Verde Nuclear Power Plant

The Phoenix Dispatch Center is connected to the nuclear power plant via a separate telephone and computer located in the Teletype room.

2.1.8.5 Mobile Data Computer System Interface

Access to the existing MDT system is provided via the mainframe applications. The following capabilities are currently available:

- Arizona State concealed weapon permit queries
- ACJIS text based inquiries on drivers' licenses, vehicle registrations, wanted persons, stolen vehicles, stolen/recovered guns, etc.
- NLETS hazardous materials quires
- Vehicle to Vehicle, Vehicle to Dispatch and Dispatch to Vehicle messaging.

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2.1.9 Operations Communications' (OPCOMM) Wide Area Network

Currently the terminals located in the Phoenix Dispatch Center are connected to the Mainframe applications via 100 Megabit fiber lines. Tucson is connected to the Mainframe through a Frame Relay network provided by AT&T. Flagstaff is also connected by a Frame Relay circuit. However, Flagstaff's frame relay is provided by Qwest. The speed of the network is guaranteed to be at least 1 Megabit per second (two percent of the time) and normally 1.5 megabits per second (98 percent of the time).The network has been reliable, having experienced only a couple of failures over past few years.

2.1.10 Mainframe Applications Used by Operations Communications (OPCOMM)

All three Dispatch Centers, Phoenix, Tucson and Flagstaff, currently have access to mainframe applications that are integral to the dispatch process. Communications Personnel access these mainframe systems on 3270 character-based terminals and 3270 character based MDTs. Graphical capabilities, i.e. images or GIS mapping are not currently available. Ad hoc query capabilities are also not currently supported. The queries only provide predefined search criteria and display the output.

In general, a terminal operator has to separately initiate a query in each system's database files. A few of the applications automatically search other local or NCIC databases.
The databases reside on a mainframe computer and are not ODBC compliant. The majority of the text based ACJIS, NCIC, and NLETS transactions are NCIC-2000 compliant.

The Offered CAD system must either replace or interface with these mainframe systems. Terminal emulation preformed on a CAD monitor is one option of providing access to these processes. However, a seamless interface is preferred.

The following existing mainframe systems assist communications personnel dispatch resources, capture and manage incident/resource information and provide access to Arizona Motor Vehicle Division (MVD), Arizona Criminal Justice Information System (ACJIS), NCIC and NLETS databases and systems. The applications all reside on a IBM Mainframe computer and are developed in CICS or Natural accessing ADABAS database:

2.1.10.1 General Applications

<u>DEPARTMENT AUTOMATED REPORT TRACKING (DART)</u> this on-line system is used to provide accountability for all department report (DR) numbers issued. This system controls the generation of sequential department report numbers. The system tracks department reports and any corresponding documents generated for incidents, arrests, and accidents, providing an

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automated audit trail and filing system. OPCOMM enters skeleton information into the DART system for the incidents, evidence collections, accidents, offenses and vehicle tow actions related to a department number. When an officer later submits completed paper documents for the incidents, accidents, etc. to their district office, personnel in the district office then enter additional information from each officer's document into the DART system.

DRIVERS LICENSE BROWSE INQUIRY SYSTEM (DLBI) this on-line system is updated monthly with Motor Vehicle Division (MVD) information. It allows drivers license information to be retrieved and displayed without having the exact spelling of the driver's full name and date of birth. This saves considerable time in the investigative process, since the MVD inquiry system requires the exact spelling of the driver's name, which may not be available in an investigative situation.

EMERGENCY MEDICAL SERVICES COMMUNICATION (EMED) this on-line system is used by Phoenix Operational Communications to record all ambulance calls patched through the communications facilities.

HIGHWAY MILEPOST TABLE (HMPT) this on-line system is maintained by the Highway Patrol Division to define mileposts of highways for traffic enforcement responsibility by each Highway Patrol district in Arizona.

HIGHWAY PATROL BUREAU SCHEDULING (HPBS) this online system is used by the Highway Patrol, Criminal Investigations, and OPCOMM personnel for maintaining and inquiring of officer daily duty schedules.

PERSONNEL DEPLOYMENT SYSTEM (PDEP) this on-line system records data entered daily by the Highway Patrol Bureau including highway information, accident detail, officer activities, and mileage data. This information is correlated to determine the most effective deployment of personnel in reducing accidents and in setting future bureau goals and objectives.

VEHICLE REGISTRATION SYSTEM (VREG) this on-line system allows the investigator to identify specific vehicles from full or partial license plate plus selected characteristics such as year, make, and owner name. Typically, a list of potential suspect vehicles will be obtained from which the investigator can eliminate candidates. This greatly reduces the number of suspect vehicles in a search and increases the probability of a successful match. The data is obtained from the Motor Vehicle Division and is reloaded monthly.

BADGE/NAME AND ADDRESS LIST (BADG) this on-line system provides general information on all employees and displays a Department electronic telephone directory. An employee's badge, name, rank, location, phone number, pager number, and mail drop code are displayed when the

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system is queried by badge number or by name. Home address information is also available and is a secured function. The telephone directory will display functional unit names and associated employees.

CALL SIGN TABLE (KALL) this department-wide on-line system is used to cross reference call signs to badge numbers. Inquiries can be made by call sign, badge number, unit location, or name. History of call sign use is automatically maintained. Update capabilities include changing call sign assignments, adding new employees, adding new call sign prefixes, and adding user IDs for update access. Batch reports listing employees in call sign, badge and location sequence are produced weekly.

PHONE SYSTEM (PHON) this is an on-line mainframe system used as an electronic Rolodex. Entries in this system may include phone information for entities/people both within the agency and outside of the agency. Data maintenance and database access are restricted to selected DPS personnel such as OPCOMM. Phone numbers, locations and miscellaneous comments are displayed for each entity/name in alphabetic sequence. A starting "from name" may be entered to jump to another entity/name within the system file.

VALIDATION CODES TABLE SYSTEM (TABL) this mainframe on-line system is accessed by the Criminal Investigation Bureau to maintain lists of NCIC and other codes. The TABL system contains valid codes and their descriptions for Arizona ORI's, NCIC state codes, NCIC vehicle makes and models, etc. This mainframe data is replicated on a weekly basis to an Oracle database on an AIX server. There are plans to replace this Oracle database with DB2. The location of this DB2 database server has not yet been determined.

These tables of codes in the mainframe are accessed by various mainframe applications and the replicated codes in the Oracle database are access by several custom developed Notes Domino applications for data validation and to ensure standardized entry for subsequent data searches.

2.1.10.2 ACJIS Inquiry Transactions

The following various ACJIS inquiry transactions are utilized by OPCOMM (Dispatch) and patrol personnel:

ACJIS HELP System (ACJS) contains information on the formats used on the ACJIS network for inquiry transactions.

Arizona Revised Statutes Codes System (ARSC) contains information on Arizona revised statute codes. The system returns a text description of the code, and whether the violation is a felony or misdemeanor.

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Arizona Computerized Protection Order System (ACPO) contains information on protection orders and injunctions against harassment. Records meeting NCIC criteria are automatically forwarded for entry into NCIC's protection order system. Some protection orders in the ACPO file are not on the NCIC Protection Order file because they do not meet NCIC criteria.

Arizona Computerized Stolen Vehicle System (ACSV) contains information on vehicles stolen in Arizona. It also has information on vehicles used during the commission of a felony, impounded, stored, and abandoned vehicles, stolen vehicle parts, and stolen license plates. Records meeting National Crime Information Center (NCIC) criteria are automatically forwarded for entry into NCIC's Stolen Vehicle File. Impounded and stored vehicles are automatically forwarded to National Insurance Crime Bureau (NICB) in Chicago for national inquiry by other states and are compared daily by NICB with a copy of the NCIC stolen vehicle file.

Arizona Computerized Wanted Persons System (ACWP) contains warrants held by Arizona law enforcement agencies. Records meeting NCIC criteria are automatically forwarded for entry into NCIC's Wanted Persons file. About 95 percent of the warrants in the ACWP file are not on the NCIC Wanted Person file because out-of-state extradition is not indicated or the offenses do not meet NCIC criteria. The file also contains the records of persons on intensive probation, persons under federal supervision, repeat offenders, violent gang members, security threat group members, deceased persons, injured persons, arrest bookings, and emergency/death messages.

Convicted Persons on Supervised Release (CPSR): Any local, state, or federal criminal justice agency may enter information on probationers and subjects of supervised releases convicted of federal crimes, felonies, or serious misdemeanors and released under its supervision.

Juvenile Online Tracking System (JOLT) is a statewide juvenile probation and dependency management system. The JOLTS database contains information on all juveniles referred to the juvenile court who are ages 8 through 17, who are alleged curfew violators, truants, runaways and juveniles who have committed misdemeanor and felony offenses. Juveniles listed may have been diverted by the Juvenile Courts, may have had the allegation dismissed, may have been adjudicated, could have been transferred to adult court, or may have been directly filed in adult court.

ACJIS Computerized Concealed Weapon Inquiry System (ACWI) contains records of persons with active, suspended and revoked concealed weapon permits. Record entries in this ACJIS network file are generated from the DPS Arizona Concealed Weapon Tracking System (ACWT).

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2.1.10.3 NCIC Inquiry Transactions

The following various NCIC inquiry transactions are utilized by OPCOMM (Dispatch) and patrol personnel:

Missing Persons File (NCMP) contains entries on persons that have been reported missing for one of the following reasons: endangered, involuntarily missing, physically or mentally disabled, juvenile runaway or missing after a disaster (i.e., airplane crash).

Protection Order File (NCPO) contains information on protection orders and injunctions against harassment. By having access to protection Order information, law enforcement agencies nationwide are able to obtain immediate notification of the existence and terms of specific protection orders. This capability improves the response to domestic violence incidents and identifies individuals who are prohibited from purchasing a firearm. Civil courts have access to the file, allowing them to obtain timely and accurate information for use in stalking and domestic violence cases.

Stolen Article File (NCSA) contains entries on stolen articles of numerous types. These articles include bicycles, sports equipment, televisions, stereos and sound entertainment devices, home appliances, etc.

Stolen Boat File (NCSB) contains data concerning boats of any kind that have been reported stolen. Stolen boat trailers are included in the Vehicle File.

Stolen/Recovered/Lost Gun File (NCSG) contains data about weapons of any kind which have been reported stolen, recovered weapons that were abandoned, seized, or found for which no theft report is on file, and records for lost or missing guns which might be traceable to a crime and may assist in the identification of a recovered gun.

Stolen Securities File (NCSS) contains data on securities, currency, money orders, bonds, stocks, and travelers checks that have been reported stolen.

Unidentified Persons File (NCUP) includes unidentified deceased persons, disaster victims, recovered body parts, and living persons.

Violent Gang and Terrorist Organization File (VGTO) contains information on members of these groups. Information on the groups themselves is also available. These files are automatically searched when a wanted person inquiry is processed.

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2.1.10.4 Motor Vehicle Division (MVD) Inquiry Transactions

Arizona Department of Transportation systems and databases may be queried to access:

Drivers License Information (10-27) this file provides the name, address, operator's license number, and type and status of drivers license (i.e., suspended, revoked) and restrictions.

Vehicle Registration Information (10-28) this file contains a description of the vehicle, the registered owner's name and address, license plate and tag numbers, the registration expiration date and vehicle status.

Aircraft Registration Information this file contains a description of the aircraft, the registered owner's name and address, registration and decal numbers and aircraft status.

MVD Document Requests agencies can initiate document requests for the following: vehicle title history, vehicle record, vehicle name search, driver photo, aggravated DUI packet, driving record, driving history and driving license application.

2.1.10.5 NLETS Inquiry Transactions

The following various NLETS inquiry transactions are utilized by OPCOMM (Dispatch) and patrol personnel:

Vehicles/Hot Files Subsystem (NLTV) provides Vehicle registration, drivers license, drivers history, boat and snowmobile registration files from other states and Canada. The Mexican Federal Commercial Drivers License inquiry was made available in late 1995. The following information is also available:

- The Federal Aviation Administration files (FAA) contain registration records on all types of aircraft including owner information and specific aircraft information. It also contains a tracking file to record aircraft sightings.
- ATF Firearm Tracing Requests are sent to the National Tracing Center (NTC) for a systematic tracking of a gun used in a crime from the place of manufacture to the place of sale, such as a retail establishment or gun dealer.
- LOJACK Stolen Vehicle Tracking: In cooperation with NLETS, the LOJACK database receives stolen vehicle transactions and matches them with their database of installed tracking devices. When a match is made, the LOJACK system transmits a code to the vehicle to begin transmitting a signal, which can be traced by law enforcement vehicles equipped with LOJACK tracking computers.

NLETS Other subsystem (NLTO) provides information on the following topics:

- The Hazardous Materials File (HAZMAT) contains information on many types of hazardous materials including safety precautions, handling and disposal procedures, and United Nations (UN) number.
- The ORION file enables users to find the ORI of an NLETS user agency when the ORI is unknown and to obtain detailed information about an agency.
- Road and Weather Condition information for other states is also available through NLETS.

2.2 Current Mobile Data Computer System

The current wireless data network infrastructure is comprised of four transmitter sites connected to a centralized Kustom network controller, which in turn connects to the mainframe computer. Through the mainframe connection, field users are able to run a set of inquiries to ACJIS/NCIC/NLETS through simple downloadable forms. In addition, field users can send short textual messages to other users on the system. The sites and frequencies currently utilized are outlined in the following table.

Table 4 – Presently Utilized RF Sites

Site Name	ID	Latitude (NAD 27)	Longitude (NAD 27)	Elevation (Meters)	Antenna Model	Connection Type	Frequency
Mount Lemmon	ML	32:26:25.0 N	110:47:13.0 W	2774	SRL420 - Omni	Granger Microwave	Tx: 858.0000 Rx: 813.0000
South Mountain	SM	33:19:57.0 N	112:03:58.0 W	817	SRL420 - Omni	Granger Microwave	Tx: 858.9625 Rx: 813.9625
Tumamoc Hill	TH	32:12:51.0 N	111:00:18.0 W	945	SRL420 - Omni	Granger Microwave	Tx: 858.0000 Rx: 813.0000
White Tanks Mountain	WT	33:34:02.0 N	112:33:29.0 W	1225	SRL420 - Omni	Granger Microwave	Tx: 858.9625 Rx: 813.9625

As the system continues to age many of the vehicles that were equipped with data terminals have had the equipment removed due to the unavailability of spare or replacement parts.

The only aspect of the existing design that is anticipated to possibly be concurrent with the new system is the actual tower locations as well as use of the microwave connectivity.

2.3 State Standards and Preferences

The State has developed hardware, software and database standards for its new systems and applications. Although Offerors will not be eliminated for not complying with these standards, the State will look more favorably on responses that conform to the following standards:

- Database: DB2 Relational Database Management System (RDBMS), which is the standard for both Mainframe and AIX applications. The State has user licenses available for use with the Offered system. Offerors are encouraged to utilize these licenses to reduce system costs.
- Web Server: IBM Notes Domino
- Operating Systems: AIX, OS/390, Novell
- Applications: Prefer browser-based applications as opposed to standard Windows GUI client applications that must be installed on PC hard drives
- Rack mount servers

The State's current desktop Personal Computer standards (minimum or better depending on market availability) are:

- IBM PC (desktop or tower) with:
  - Pentium IV processor (1 GHz)
  - 256 MB RAM
  - 40 GB hard drive
  - Integrated network 10/100 Ethernet adapter
  - DVD ROM Drive
  - 17" color monitor
  - Surge protector
  - Current Microsoft Windows Professional Operating System
  - Microsoft Office XP standard
  - IBM Host Access Client Package (mainframe access)
  - Lotus Notes e-mail
  - Norton Anti-Virus
  - Novell NetWare client 32

The following standards are desirable for new application systems developed for, or purchased by the State:

- Applications should be compatible with or utilize ODBC relational database technology.
- Compatible with existing system environment (only applies to new standards, i.e. DB2, Lotus Notes, Unix, but not with NATURAL, 3270 emulation plus any other old technology that is being replaced or needs to be replaced).
- Servers/network/operating system that can be supported by current Information Technology Technical personnel.
- Application source code in escrow

- Can be integrated with existing legacy applications by using middle ware such as IBM MQ and MQSI.
- Can be easily customized by Offeror to meet RFP specifications, i.e. parameter driven.
- Offeror provides technical and end user training.

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3. UNIFORM INSTRUCTIONS TO OFFERORS

I. **Definition of Terms.** As used in these Instructions, the terms listed below are defined as follows:

A. *"Attachment"* means any item the Solicitation requires an Offeror to submit as part of the Offer.

B. *"Contract"* means the combination of the Solicitation, including the Uniform and Special Instructions to Offerors, the Uniform and Special Terms and Conditions, and the Specifications and Statement or Scope of Work; the Offer and any Best and Final Offers; and any Solicitation Amendments or Contract Amendments; and any terms applied by law.

C. *"Contract Amendment"* means a written document signed by the Procurement Officer that is issued for the purpose of making changes in the Contract.

D. *"Days"* means calendar days unless otherwise specified.

E. *"Exhibit"* means any item labeled as an Exhibit in the Solicitation or placed in the Exhibits section of the Solicitation.

F. *"Gratuity"* means a payment, loan, subscription, advance, deposit of money, services, or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value is received.

G. *"Offer"* means bid, proposal or quotation.

H. *"Offeror"* means a vendor who responds to a Solicitation.

I. *"Procurement Officer"* means the person duly authorized by the State to enter into and administer Contracts and make written determinations with respect to the Contract or his or her designee.

J. *"Solicitation"* means an Invitation for Bids ("IFB"), a Request for Proposals ("RFP"), or a Request for Quotations ("RFQ").

K. *"Solicitation Amendment"* means a written document that is authorized by the Procurement Officer and issued for the purpose of making changes to the Solicitation.

L. *"Subcontract"* means any Contract, express or implied, between the Contractor and another party or between a subcontractor and another party delegating or assigning, in whole or in part, the making or furnishing of any material or any service required for the performance of the Contract.

M. *"State"* means the State of Arizona and Department or Agency of the State that executes the Contract.

II. **Inquiries**

A. Duty to Examine. It is the responsibility of each Offeror to examine the entire Solicitation, seek clarification in writing, and check its Offer for accuracy before submitting the Offer. Lack of care in preparing an Offer shall not be a grounds for withdrawing the Offer after the Offer due date and time, nor shall it give rise to any Contract claim.

B. Solicitation Contact Person. Any inquiry related to a Solicitation, including any requests for or inquiries regarding standards referenced in the Solicitation, shall be directed solely to the Solicitation contact person. The Offeror shall not contact or direct inquiries concerning this Solicitation to any other State employee unless the Solicitation specifically identifies a person other than the Solicitation contact person as a contact.

C. Submission of Inquiries. The Procurement Officer or the person identified in the Solicitation as the contact for inquiries may require that an inquiry be submitted in writing. Any inquiry related to a Solicitation shall refer to the appropriate Solicitation number, page and paragraph. Do not place the Solicitation number on the outside of the envelope containing that inquiry, since it may then be identified as an Offer and not be opened until after the Offer due date and time.

D. Timeliness. Any inquiry shall be submitted as soon as possible and at least seven days before the Offer due date and time. Failure to do so may result in the inquiry not being considered for a Solicitation Amendment.

E. No Right to Rely on Verbal Responses. Any inquiry that results in changes to the Solicitation shall be answered solely through a written Solicitation Amendment. An Offeror may not rely on verbal responses to its inquiries.

F. Solicitation Amendments. The Solicitation shall only be modified by a Solicitation Amendment.

G. Pre-Offer Conference. If a pre-Offer conference has been scheduled under this Solicitation, the date, time and location shall appear on the Solicitation cover sheet or elsewhere in the Solicitation. An Offeror should raise any questions they may have about the Solicitation or the procurement at that time. An Offeror may not rely on any verbal responses to questions at the conference. Material issues raised at the

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conference that result in changes to the Solicitation shall be answered solely through a written Solicitation Amendment.

H. Persons With Disabilities. Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting the Solicitation contact person. Requests shall be made as early as possible to allow time to arrange the accommodation.

III. **Offer Preparation**

A. Forms: No Facsimile or Telegraphic Offers. An Offer shall be submitted either on the forms provided in this Solicitation or their substantial equivalent. Any substitute document for the forms provided in this Solicitation will be legible and contain the same information requested on the forms. A facsimile, telegraphic, mailgram or electronic mail Offer shall be rejected.

B. Typed or Ink; Corrections. The Offer shall be typed or in ink. Erasures, interlineations or other modifications in the Offer shall be initialed in ink by the person signing the Offer. Modifications shall not be permitted after Offers have been opened except as otherwise provided under applicable law.

C. Evidence of Intent to be Bound. The Offer and Acceptance form within the Solicitation shall be submitted with the Offer and shall include a signature by a person authorized to sign the Offer. The signature shall signify the Offeror s intent to be bound by the Offer and the terms of the Solicitation and that the information provided is true, accurate and complete. Failure to submit verifiable evidence of an intent to be bound, such as an original signature, shall result in rejection of the Offer.

D. Exceptions to Terms and Conditions. All exceptions included with the Offer shall be submitted in a clearly identified separate section of the Offer in which the Offeror clearly identifies the specific paragraphs of the Solicitation where the exceptions occur. Any exceptions not included in such a section shall be without force and effect in any resulting Contract unless such exception is specifically referenced by the Procurement Officer in a written statement. The Offeror s preprinted or standard terms will not be considered by the State as a part of any resulting Contract.

1. Invitation for Bids: An Offer that takes exception to a material requirement of any part of the Solicitation, including terms and conditions, shall be rejected.
2. Request for Proposals: All exceptions that are contained in the Offer may negatively affect the State s proposal evaluation based on the evaluation criteria as stated in the Solicitation or result in rejection of the Offer.

E. Subcontracts. Offeror shall clearly list any proposed subcontractors and the subcontractor s proposed responsibilities in the Offer.

F. Cost of Offer Preparation. The State will not reimburse any Offeror the cost of responding to a Solicitation.

G. Solicitation Amendments. Each Solicitation Amendment shall be signed with an original signature by the person signing the Offer, and shall be submitted no later than the Offer due date and time. Failure to return a signed copy of a material Solicitation Amendment may result in rejection of the Offer.

H. Federal Excise Tax. The State of Arizona is exempt from certain Federal Excise Tax on manufactured goods. Exemption Certificates will be prepared upon request.

I. Provision of Tax Identification Numbers. Offerors are required to provide their Arizona Transaction Privilege Tax Number and/or Federal Tax Identification number, if applicable, in the space provided on the Offer and Acceptance Form and provide the tax rate and amount, if applicable, on the Price Sheet.

J. Identification of Taxes in Offer. The State of Arizona is subject to all applicable taxes. Offerors shall indicate taxes as a separate item in the Offer.

K. Disclosure. If the firm, business or person submitting this Offer has been debarred, suspended or otherwise lawfully precluded from participating in any public procurement activity, including being disapproved as a subcontractor with any Federal, state or local government, or if any such preclusion from participation from any public procurement activity is currently pending, the Offeror shall fully explain the circumstances relating to the preclusion or proposed preclusion in the Offer. The Offeror shall include a letter with its Offer setting forth the name and address of the governmental unit, the effective date of this suspension or debarment, the duration of the suspension or debarment, and the relevant circumstances relating to the suspension or debarment. If suspension or debarment is

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currently pending, a detailed description of all relevant circumstances including the details enumerated above shall be provided.

L. Solicitation Order of Precedence. In the event of a conflict in the provisions of this Solicitation, the following shall prevail in the order set forth below:
   1. Special Terms and Conditions;
   2. Uniform Terms and Conditions;
   3. Statement or Scope of Work;
   4. Specifications;
   5. Attachments;
   6. Exhibits;
   7. Special Instructions to Offerors;
   8. Uniform Instructions to Offerors.

M. Delivery. Unless stated otherwise in the Solicitation, all prices shall be F.O.B. Destination and shall include all delivery and unloading at the destination(s).

IV. Submission of Offer

A. Sealed Envelope or Package. Each Offer shall be submitted to the submittal location identified in this Solicitation, in a sealed envelope or package that identifies its contents as an Offer and the Solicitation number to which it responds. The appropriate Solicitation number shall be plainly marked on the outside of the envelope or package.

B. Offer Amendment or Withdrawal. An Offer may not be amended or withdrawn after the Offer due date and time except as otherwise provided under applicable law.

C. Public Record. Under applicable law, all Offers submitted and opened are public records and must be retained by the State. Offers shall be open to public inspection after Contract award, except for such Offers deemed to be confidential by the State. If an Offeror believes that information in its Offer should remain confidential, it shall stamp as confidential that information and submit a statement with its Offer detailing the reasons that information should not be disclosed. The State shall make a determination on whether the stamped information is confidential pursuant to the Arizona Procurement Code.

D. Non-collusion, Employment, and Services. By signing the Offer and Acceptance Form or other official contract form, the Offeror certifies that:
   1. It did not engage in collusion or other anti-competitive practices in connection with the preparation or submission of its Offer; and
   2. It does not discriminate against any employee or applicant for employment or person to whom it provides services because of race, color, religion, sex, national origin, or disability, and that it complies with all applicable Federal, state and local laws and executive orders regarding employment.

V. Evaluation

A. Unit Price Prevails. Where applicable, in the case of discrepancy between the unit price or rate and the extension of that unit price or rate, the unit price or rate shall govern.

B. Taxes. Arizona transaction privilege and use taxes shall not be considered when evaluating Offers.

C. Late Offers. An Offer submitted after the exact Offer due date and time shall be rejected.

D. Disqualification. The Offer of an Offeror who is currently debarred, suspended or otherwise lawfully prohibited from any public procurement activity shall be rejected.

E. Offer Acceptance Period. An Offeror submitting an Offer under this Solicitation shall hold its Offer open for the number of days from the Offer due date that is stated in the Solicitation. If the Solicitation does not specifically state a number of days for Offer acceptance, the number of days shall be ninety (90). If a Best and Final Offer is requested pursuant to a Request for Proposals, an Offeror shall hold its Offer open for ninety (90) days from the Best and Final Offer due date.

F. Payment. Payments shall comply with the requirements of ARS Titles 35 and 41, Net 30 days. Upon receipt and acceptance of goods or services, the Contractor shall submit a complete and accurate invoice for payment from the State within thirty (30) days.

G. Waiver and Rejection Rights. Notwithstanding any other provision of the Solicitation, the State reserves the right to:

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1. Waive any minor informality;
2. Reject any and all Offers or portions thereof; or
3. Cancel a Solicitation.

VI. **Award**

A. Number or Types of Awards. Where applicable, the State reserves the right to make multiple awards or to award a Contract by individual line items or alternatives, by group of line items or alternatives, or to make an aggregate award, whichever is deemed most advantageous to the State. If the Procurement Officer determines that an aggregate award to one Offeror is not in the State s best interest, "all or none" Offers shall be rejected.

B. Contract Inception. An Offer does not constitute a Contract nor does it confer any rights on the Offeror to the award of a Contract. A Contract is not created until the Offer is accepted in writing by the Procurement Officer s signature on the Offer and Acceptance Form. A notice of award or of the intent to award shall not constitute acceptance of the Offer.

C. Effective Date. The effective date of this Contract shall be the date that the Procurement Officer signs the Offer and Acceptance form or other official contract form, unless another date is specifically stated in the Contract.

VII. **Protests**. A protest shall comply with and be resolved according to Arizona Revised Statutes Title 41, Chapter 23, Article 9 and rules adopted thereunder. Protests shall be in writing and be filed with both the Procurement Officer of the purchasing agency and with the State Procurement Administrator. A protest of a Solicitation shall be received by the Procurement Officer before the Offer due date. A protest of a proposed award or of an award shall be filed within ten (10) days after the protester knows or should have known the basis of the protest. A protest shall include:

A. The name, address and telephone number of the protester;
B. The signature of the protester or its representative;
C. Identification of the purchasing agency and the Solicitation or Contract number;
D. A detailed statement of the legal and factual grounds of the protest including copies of relevant documents; and
E. The form of relief requested.

VIII. **Comments Welcome**. The State Procurement Office periodically reviews the Uniform Instructions to Offerors and welcomes any comments you may have. Please submit your comments to: John Adler, State Procurement Administrator, State Procurement Office, 15 South 15th Avenue, Suite 103, Phoenix, Arizona, 85007.

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4. UNIFORM TERMS AND CONDITIONS

1. **Definition of Terms.** As used in this Solicitation and any resulting Contract, the terms listed below are defined as follows:
   1. *"Attachment"* means any item the Solicitation requires the Offeror to submit as part of the Offer.
   2. *"Contract"* means the combination of the Solicitation, including the Uniform and Special Instructions to Offerors, the Uniform and Special Terms and Conditions, and the Specifications and Statement or Scope of Work; the Offer and any Best and Final Offers; and any Solicitation Amendments or Contract Amendments; and any terms applied by law.
   3. *"Contract Amendment"* means a written document signed by the Procurement Officer that is issued for the purpose of making changes in the Contract.
   4. *"Contractor"* means any person who has a Contract with the State.
   5. *"Days"* means calendar days unless otherwise specified.
   6. *"Exhibit"* means any item labeled as an Exhibit in the Solicitation or placed in the Exhibits section of the Solicitation.
   7. *"Gratuity"* means a payment, loan, subscription, advance, deposit of money, services, or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value is received.
   8. *"Offer"* means bid, proposal or quotation.
   9. *"Offeror"* means a vendor who responds to any type of Solicitation.
   10. *"Procurement Officer"* means the person duly authorized by the State to enter into and administer Contracts and make written determinations with respect to the Contract or their designee.
   11. *"Solicitation"* means an Invitation for Bids (IFB), a Request for Proposals (RFP), or a Request for Quotations (RFQ).
   12. *"Solicitation Amendment"* means a written document that is authorized by the Procurement Officer and issued for the purpose of making changes to the Solicitation.
   13. *"Subcontract"* means any Contract, express or implied, between the Contractor and another party or between a subcontractor and another party delegating or assigning, in whole or in part, the making or furnishing of any material or any service required for the performance of the Contract.
   14. *"State"* means the State of Arizona and Department or Agency of the State that executes the Contract.

2. **Contract Interpretation**

   1. Arizona Law. The law of Arizona applies to this Contract including, where applicable, the Uniform Commercial Code as adopted by the State of Arizona and the Arizona Procurement Code, Arizona Revised Statutes (A.R.S.) Title 41, Chapter 23, and its implementing rules, Arizona Administrative Code (A.A.C.) Title 2, Chapter 7.

   2. Implied Contract Terms. Each provision of law and any terms required by law to be in this Contract are a part of this Contract as if fully stated in it.

   3. Contract Order of Precedence. In the event of a conflict in the provisions of the Contract, as accepted by the State and as they may be amended, the following shall prevail in the order set forth below:

      1. Special Terms and Conditions;
      2. Uniform Terms and Conditions;
      3. Statement or Scope of Work;
      4. Specifications;
      5. Attachments;
      6. Exhibits;
      7. Documents referenced or included in the Solicitation.

   4. Relationship of Parties. The Contractor under this Contract is an independent Contractor. Neither party to this Contract shall be deemed to be the employee or agent of the other party to the Contract.

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5. Severability. The provisions of this Contract are severable. Any term or condition deemed illegal or invalid shall not affect any other term or condition of the Contract.

6. No Parole Evidence. This Contract is intended by the parties as a final and complete expression of their agreement. No course of prior dealings between the parties and no usage of the trade shall supplement or explain any terms used in this document.

7. No Waiver. Either party's failure to insist on strict performance of any term or condition of the Contract shall not be deemed a waiver of that term or condition even if the party accepting or acquiescing in the nonconforming performance knows of the nature of the performance and fails to object to it.

3. **Contract administration and operation.**

1. Records. Under A.R.S. ' 35-214 and ' 35-215, the Contractor shall retain and shall contractually require each subcontractor to retain all data and other records ("records") relating to the acquisition and performance of the Contract for a period of five years after the completion of the Contract. All records shall be subject to inspection and audit by the State at reasonable times. Upon request, the Contractor shall produce a legible copy of any or all such records.

2. Non-Discrimination. The Contractor shall comply with State Executive Order No. 99-4 and all other applicable Federal and State laws, rules and regulations, including the Americans with Disabilities Act.

3. Audit. Pursuant to ARS ' 35-214, at any time during the term of this Contract and five (5) years thereafter, the Contractors or any subcontractors books and records shall be subject to audit by the State and, where applicable, the Federal Government, to the extent that the books and records relate to the performance of the Contract or Subcontract.

4. Inspection and Testing. The Contractor agrees to permit access to its facilities, subcontractor facilities and the Contractor's processes for producing the materials, at reasonable times for inspection of the materials covered under this Contract. The State shall also have the right to test at its own cost the materials to be supplied under this Contract. Neither inspection at the Contractors facilities nor testing shall constitute final acceptance of the materials. If the State determines non-compliance of the materials, the Contractor shall be responsible for the payment of all costs incurred by the State for testing and inspection.

5. Notices. Notices to the Contractor required by this Contract shall be made by the State to the person indicated on the Offer and Acceptance form submitted by the Contractor unless otherwise stated in the Contract. Notices to the State required by the Contract shall be made by the Contractor to the Solicitation Contact Person indicated on the Solicitation cover sheet, unless otherwise stated in the Contract. An authorized Procurement Officer and an authorized Contractor representative may change their respective person to whom notice shall be given by written notice and an amendment to the Contract shall not be necessary.

6. Advertising and Promotion of Contract. The Contractor shall not advertise or publish information for commercial benefit concerning this Contract without the prior written approval of the Procurement Officer.

7. Property of the State. Any materials, including reports, computer programs and other deliverables, created under this Contract are the sole property of the State. The Contractor is not entitled to a patent or copyright on those materials and may not transfer the patent or copyright to anyone else. The Contractor shall not use or release these materials without the prior written consent of the State.

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4. **Costs and Payments**

1. Payments. Payments shall comply with the requirements of A.R.S. Titles 35 and 41, Net 30 days. Upon receipt and acceptance of goods or services, the Contractor shall submit a complete and accurate invoice for payment from the State within thirty (30) days.

2. Delivery. Unless stated otherwise in the Contract, all prices shall be F.O.B. Destination and shall include all delivery and unloading at the destinations.

3. Applicable Taxes.

1. Payment of Taxes by the State. The State shall pay only the rate and/or amount of taxes identified in the Offer and in any resulting Contract.

2. State and Local Transaction Privilege Taxes. The State of Arizona is subject to all applicable state and local transaction privilege taxes. Transaction privilege taxes apply to the sale and are the responsibility of the seller to remit. Failure to collect taxes from the buyer does not relieve the seller from its obligation to remit taxes.

3. Tax Indemnification. Contractor and all subcontractors shall pay all Federal, state and local taxes applicable to its operation and any persons employed by the Contractor. Contractor shall, and require all subcontractors to hold the State harmless from any responsibility for taxes, damages and interest, if applicable, contributions required under Federal, and/or state and local laws and regulations and any other costs including transaction privilege taxes, unemployment compensation insurance, Social Security and Worker's Compensation.

4. IRS W9 Form. In order to receive payment under any resulting Contract, Contractor shall have a current I.R.S. W9 Form on file with the State of Arizona.

4. Availability of Funds for the Next Fiscal Year. Funds may not presently be available for performance under this Contract beyond the current fiscal year. No legal liability on the part of the State for any payment may arise under this Contract beyond the current fiscal year until funds are made available for performance of this Contract. The State shall make reasonable efforts to secure such funds.

5. **Contract changes**

1. Amendments. This Contract is issued under the authority of the Procurement Officer who signed this Contract. The Contract may be modified only through a Contract Amendment within the scope of the Contract unless otherwise permitted by the Special Terms and Conditions. Changes to the Contract, including the addition of work or materials, the revision of payment terms, or the substitution of work or materials, directed by an unauthorized State employee or made unilaterally by the Contractor are violations of the Contract and
of applicable law. Such changes, including unauthorized written Contract Amendments shall be void and without effect, and the Contractor shall not be entitled to any claim under this Contract based on those changes.

2. Subcontracts. The Contractor shall not enter into any Subcontract under this Contract without the advance written approval of the Procurement Officer. The Subcontract shall incorporate by reference the terms and conditions of this Contract.

3. Assignment and Delegation. The Contractor shall not assign any right nor delegate any duty under this Contract without the prior written approval of the Procurement Officer. The State shall not unreasonably withhold approval.

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6. **Risk and Liability**

1. Risk of Loss. The Contractor shall bear all loss of conforming material covered under this Contract until received by authorized personnel at the location designated in the purchase order or Contract. Mere receipt does not constitute final acceptance. The risk of loss for nonconforming materials shall remain with the Contractor regardless of receipt.

2. General Indemnification. To the extent permitted by A.R.S. ' 41-621 and ' 35-154, the State of Arizona shall be indemnified and held harmless by the Contractor for its vicarious liability as a result of entering into this Contract. Each party to this Contract is responsible for its own negligence.

3. Indemnification - Patent and Copyright. To the extent permitted by A.R.S. ' 41-621 and ' 35-154, the Contractor shall indemnify and hold harmless the State against any liability, including costs and expenses, for infringement of any patent, trademark or copyright arising out of Contract performance or use by the State of materials furnished or work performed under this Contract. The State shall reasonably notify the Contractor of any claim for which it may be liable under this paragraph.

4. Force Majeure.

1. Except for payment of sums due, neither party shall be liable to the other nor deemed in default under this Contract if and to the extent that such party's performance of this Contract is prevented by reason of force majeure. The term *"force majeure"* means an occurrence that is beyond the control of the party affected and occurs without its fault or negligence. Without limiting the foregoing, force majeure includes acts of God; acts of the public enemy; war; riots; strikes; mobilization; labor disputes; civil disorders; fire; flood; lockouts; injunctions-intervention-acts; or failures or refusals to act by government authority; and other similar occurrences beyond the control of the party declaring force majeure which such party is unable to prevent by exercising reasonable diligence.
2. Force Majeure shall not include the following occurrences:

1. Late delivery of equipment or materials caused by congestion at a manufacturer's plant or elsewhere, or an oversold condition of the market;
2. Late performance by a subcontractor unless the delay arises out of a force majeure occurrence in accordance with this force majeure term and condition; or
3. Inability of either the Contractor or any subcontractor to acquire or maintain any required insurance, bonds, licenses or permits.

3. If either party is delayed at any time in the progress of the work by force majeure, the delayed party shall notify the other party in writing of such delay, as soon as is practicable and no later than the following working day, of the commencement thereof and shall specify the causes of such delay in such notice. Such notice shall be delivered or mailed certified-return receipt and shall make a specific reference to this article, thereby invoking its provisions. The delayed party shall cause such delay to cease as soon as practicable and shall notify the other party in writing when it has done so. The time of completion shall be extended by Contract Amendment for a period of time equal to the time that results or effects of such delay prevent the delayed party from performing in accordance with this Contract.

4. Any delay or failure in performance by either party hereto shall not constitute default hereunder or give rise to any claim for damages or loss of anticipated profits if, and to the extent that such delay or failure is caused by force majeure.

5. Third Party Antitrust Violations. The Contractor assigns to the State any claim for overcharges resulting from antitrust violations to the extent that those violations concern materials or services

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supplied by third parties to the Contractor, toward fulfillment of this Contract.

7. **Warranties**

1. Liens. The Contractor warrants that the materials supplied under this Contract are free of liens.

2. Quality. Unless otherwise modified elsewhere in these terms and conditions, the Contractor warrants that, for one year after acceptance by the State of the materials, they shall be:

1. Of a quality to pass without objection in the trade under the Contract description;
2. Fit for the intended purposes for which the materials are used;
3. Within the variations permitted by the Contract and are of even kind, quantity, and quality within each unit and among all units;
4. Adequately contained, packaged and marked as the Contract may require; and
5. Conform to the written promises or affirmations of fact made by the Contractor.

3. Fitness. The Contractor warrants that any material supplied to the State shall fully conform to all requirements of the Contract and all representations of the Contractor, and shall be fit for all purposes and uses required by the Contract.

4. Inspection/Testing. The warranties set forth in subparagraphs 7.1 through 7.3 of this paragraph are not affected by inspection or testing of or payment for the materials by the State.

5. Year 2000.

1. Notwithstanding any other warranty or disclaimer of warranty in this Contract, the Contractor warrants that all products delivered and all services rendered under this Contract shall comply in all respects to performance and delivery requirements of the specifications and shall not be adversely affected by any date-related data Year 2000 issues. This warranty shall survive the expiration or termination of this Contract. In addition, the defense of *force majeure* shall not apply to the Contractor's failure to perform specification requirements as a result of any date-related data Year 2000 issues.

2. Additionally, notwithstanding any other warranty or disclaimer of warranty in this Contract, the Contractor warrants that each hardware, software, and firmware product delivered under this Contract shall be able to accurately process date/time data (including but not limited to calculation, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations, to the extent that other information technology utilized by the State in combination with the information technology being acquired under this Contract properly exchanges date-time data with it. If this Contract requires that the information technology products being acquired perform as a system, or that the information technology products being acquired perform as a system in combination with other State information technology, then this warranty shall apply to the acquired products as a system. The remedies available to the State for breach of this warranty shall include, but shall not be limited to, repair and replacement of the information technology products delivered under this Contract. In addition, the defense of *force majeure* shall not apply to the failure of the Contractor to perform any specification requirements as a result of any date-related data Year 2000 issues.

6. Exclusions. Except as otherwise set forth in this Contract, there are no express or implied warranties of merchantability or fitness.

7. Compliance With Applicable Laws. The materials and services supplied under this Contract shall

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comply with all applicable Federal, state and local laws, and the Contractor shall maintain all applicable license and permit requirements.

8. Survival of Rights and Obligations after Contract Expiration or Termination.

1. Contractor's Representations and Warranties. All representations and warranties made by the Contractor under this Contract shall survive the expiration or termination hereof. In addition, the parties hereto acknowledge that pursuant to A.R.S. '12-510, except as provided in A.R.S. '12-529, the State is not subject to or barred by any limitations of actions prescribed in A.R.S., Title 12, Chapter 5.

2. Purchase Orders. The Contractor shall, in accordance with all terms and conditions of the Contract, fully perform and shall be obligated to comply with all purchase orders received by the Contractor prior to the expiration or termination hereof, unless otherwise directed in writing by the Procurement Officer, including, without limitation, all purchase orders received prior to but not fully performed and satisfied at the expiration or termination of this Contract.

8. **State's Contractual Remedies**

1. Right to Assurance. If the State in good faith has reason to believe that the Contractor does not intend to, or is unable to perform or continue performing under this Contract, the Procurement Officer may demand in writing that the Contractor give a written assurance of intent to perform. Failure by the Contractor to provide written assurance within the number of Days specified in the demand may, at the State's option, be the basis for terminating the Contract under the Uniform Terms and Conditions.

2. Stop Work Order.

1. The State may, at any time, by written order to the Contractor, require the Contractor to stop all or any part, of the work called for by this Contract for a period of ninety (90) Days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage.

2. If a stop work order issued under this clause is canceled or the period of the order or any extension expires, the Contractor shall resume work. The Procurement Officer shall make an equitable adjustment in the delivery schedule or Contract price, or both, and the Contract shall be amended in writing accordingly.

3. Non-exclusive Remedies. The rights and the remedies of the State under this Contract are not exclusive.

4. Nonconforming Tender. Materials supplied under this Contract shall fully comply with the Contract. The delivery of materials or a portion of the materials in an installment that do not fully comply constitutes a breach of contract. On delivery of nonconforming materials, the State may terminate the Contract for default under applicable termination clauses in the Contract, exercise any of its rights and remedies under the Uniform Commercial Code, or pursue any other right or remedy available to it.

5. Right of Offset. The State shall be entitled to offset against any sums due the Contractor, any expenses or costs incurred by the State, or damages assessed by the State concerning the Contractor's non-conforming performance or failure to perform the Contract, including expenses, costs and damages described in the Uniform Terms and Conditions.

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9. **Contract Termination**

1. Cancellation for Conflict of Interest. Pursuant to A.R.S. ' 38-511, the State may cancel this Contract within three (3) years after Contract execution without penalty or further obligation if any person significantly involved in initiating, negotiating, securing, drafting or creating the Contract on behalf of the State is or becomes at any time while the Contract or an extension of the Contract is in effect an employee of or a consultant to any other party to this Contract with respect to the subject matter of the Contract. The cancellation shall be effective when the Contractor receives written notice of the cancellation unless the notice specifies a later time. If the Contractor is a political subdivision of the State, it may also cancel this Contract as provided in A.R.S. ' 38-511.

2. Gratuities. The State may, by written notice, terminate this Contract, in whole or in part, if the State determines that employment or a Gratuity was offered or made by the Contractor or a representative of the Contractor to any officer or employee of the State for the purpose of influencing the outcome of the procurement or securing the Contract, an amendment to the Contract, or favorable treatment concerning the Contract, including the making of any determination or decision about contract performance. The State, in addition to any other rights or remedies, shall be entitled to recover exemplary damages in the amount of three times the value of the Gratuity offered by the Contractor.

3. Suspension or Debarment. The State may, by written notice to the Contractor, immediately terminate this Contract if the State determines that the Contractor has been debarred, suspended or otherwise lawfully prohibited from participating in any public procurement activity, including but not limited to, being disapproved as a subcontractor of any public procurement unit or other governmental body.

4. Termination for Convenience. The State reserves the right to terminate the Contract, in whole or in part at any time, when in the best interests of the State without penalty or recourse. Upon receipt of the written notice, the Contractor shall immediately stop all work, as directed in the notice, notify all subcontractors of the effective date of the termination and minimize all further costs to the State. In the event of termination under this paragraph, all documents, data and reports prepared by the Contractor under the Contract shall become the property of and be delivered to the State. The Contractor shall be entitled to receive just and equitable compensation for work in progress, work completed and materials accepted before the effective date of the termination. The cost principles and procedures provided in A.A.C. R2-7-701 shall apply.

5. Termination for Default.

   1. In addition to the rights reserved in the Uniform Terms and Conditions, the State reserves the right to terminate the Contract in whole or in part due to the failure of the Contractor to comply with any term or condition of the Contract, to acquire and maintain all required insurance policies, bonds, licenses and permits, or to make satisfactory progress in performing the Contract. The Procurement Officer shall provide written notice of the termination and the reasons for it to the Contractor.

   2. Upon termination under this paragraph, all goods, materials, documents, data and reports prepared by the Contractor under the Contract shall become the property of and be delivered to the State on demand.

   3. The State may, upon termination of this Contract, procure, on terms and in the manner that it deems appropriate, materials or services to replace those under this Contract. The Contractor shall be liable to the State for any excess costs incurred by the State in procuring materials or services in substitution for those due from the Contractor.

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6. Continuation of Performance Through Termination. The Contractor shall continue to perform, in accordance with the requirements of the Contract, up to the date of termination, as directed in the termination notice.

10. **Contract Claims.** All contract claims or controversies under this Contract shall be resolved according to A.R.S. Title 41, Chapter 23, Article 9, and rules adopted thereunder.

11. **Comments Welcome.** The State Procurement Office periodically reviews the Uniform Terms and Conditions and welcomes any comments you may have. Please submit your comments to: John Adler, State Procurement Administrator, State Procurement Office, 15 South 15th Avenue, Suite 103, Phoenix, Arizona, 85007.

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No Exceptions to TC

5. SPECIAL INSTRUCTIONS TO OFFERORS

A paragraph-by-paragraph response shall be provided indicating compliance with the described requirements for this section of the RFP. If the Offeror takes exception to a specific paragraph, they shall fully describe their exception in the appropriate section of the proposal.

Responses submitted by Offerors must comply with the following procedures or may be considered non-responsive:

5.1 Offeror's Responsibility

It is understood, and the Offeror hereby agrees, that the Offeror is solely responsible for all designs, equipment, materials, and services Offered to ensure a complete and functional System.

It is the responsibility of the Offeror to verify the completeness of the materials list and the suitability of devices Offered to meet the requirements of this RFP. Any additional equipment determined necessary for a complete installation in conformance with this RFP shall be provided and installed by the Offeror without claim for additional payment.

Proposals are expected from well-established and bona fide Offerors experienced in the manufacture, installation, optimization, verification, and maintenance of public safety data communications systems. Proposals may not be considered from any Offeror unless the Offeror is known to be skilled and has engaged in work of a character similar to that described in this RFP.

5.2 Proposal Format/Cost of Proposal Preparation

Each offeror shall submit the original and four (4) copies of the offer. The original should be clearly labeled **"original"**. The state will not reimburse the cost of developing, presenting or providing any response to this solicitation. Offers submitted for consideration should be prepared simply and economically, providing adequate information in a straightforward and concise manner, in sequence and related to the RFP.

5.3 Offer and Acceptance

In order to allow for an adequate evaluation, the state requires an offer in response to this solicitation to be valid and irrevocable for sixty days after the opening time and date.

5.4 Organization of the Request for Proposal

This RFP consists of various sections designed to fully describe the requirements for a Computer Aided Dispatch and Mobile Data Computer System. Each section provides information to guide potential Offerors in their system design, and asks specific questions that must be answered in submitted proposals.

5.4.1 Documentation Required as Part of Proposal Submission

Each copy of the submittal shall include the following:

1. A statement of compliance consisting of a listing for each section of the specification, indicating compliance, exceptions, or comments relating to the requirements of that particular section.
2. Complete system technical and operational description.
3. A detailed plan proposing how the changeover to the new system will be undertaken with a minimum amount of disruption to existing operations.
4. Standard catalog sheets for each item of equipment.
5. Itemized equipment list for the configuration submitted.
6. Description of special components.
7. Completed worksheets (PROPOSAL RESPONSE FORMS - 15).

5.5 Use of Proprietary Product Names or Manufactures

Whenever an article or material is defined in the RFP by describing a proprietary product or by using the name of a manufacturer, the term "or equal" if not inserted shall be implied. The specified article or materials shall be understood as descriptive, not restrictive; it is intended to indicate the type and quality desired. The State reserves the right to judge the quality of any substitution. Proposals of brands of like nature and quality will be considered. If proposing on other than the referenced specifications, proposals must show manufacturer, brand, model, etc., of any article covered.

5.6 Technical Information/Exceptions

The Offeror shall furnish technical information, including graphs, charts, photographs, circuit diagrams, instruction books, or other means to show that the equipment Offered fully complies with this RFP, free of charge with the proposal. In the event the published literature furnished by the Offeror is at variance with the requirements of any item of this RFP, the Offeror shall explain in detail, with full engineering support data, the reason why the Offered equipment will meet this RFP and not be considered an exception thereto. Any such variance must be noted in the proposal documentation upon submission, or the State shall determine said variance non-conforming.

5.7 Demonstration Models

All vendors are hereby notified that demonstration models, complete with technical manuals and operating instructions, of the equipment offered must be available in Phoenix. The Department of Public Safety may arrange a time and place for equipment demonstrations, for the purpose of evaluation. Demonstrations shall be performed at no expense to the state. Demonstration models, when requested by the State, must be available in Phoenix within 72 hours, unless otherwise specified by the Department of Public Safety.

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Failure to have demonstration models of the equipment offered available in Phoenix for evaluation purposes prior to contract award may result in the bid being considered non-responsive.

5.8 Complete, Unambiguous, Concise Responses

All areas of consideration should be answered as concisely as possible. Ambiguous statements, such as "All reasonable effort to provide maintenance, etc.," are grounds to declare a proposal non-responsive.

For purposes of clarity, Offerors should use the following suggested verbiage in their Section 16 responses:

AGREED (YES)	Used to indicate the Offeror's total acceptance of the condition or requirement stated. (Do not state "agreed," then offer an alternative or exception to the condition or requirement.)
EXCEPTION (NO)	Used to indicate that the Offeror takes exception to the condition or requirement stated. Offerors must state the reason for taking exception, and offer an alternative for consideration by the State.

No proposal shall be considered unless the Offeror can meet the system requirements stated in this RFP. Offers that do not provide a complete turnkey System will be rejected without further consideration.

5.9 Proposal Response Forms

Offerors must complete the forms in Section 16 of this RFP. Sections not specifically addressed in the Offer will result in the deduction of evaluation points and may result in rejection of the Offer.

5.10 Proposal Evaluation

In accordance with the Arizona Procurement Code §41-2534, Competitive Sealed Proposals, award shall be made to the responsible Offeror whose proposal is determined in writing to be the most advantageous to the State, taking into consideration the evaluation factors set forth in the Request for Proposals. Failure to provide adequate information to enable the State to evaluate the Offered systems, and the incorporated features and functions, may result in the elimination of the entire response from further consideration.

As provided by A.A.C. R2-7-331, discussions may be conducted with offerors who submit proposals determined to be reasonably susceptible of being selected for award.

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5.11 Evaluation Criteria

Each Offeror's response will be evaluated for responsiveness to the requirements of this RFP. The evaluation criteria shall include the following in order of importance:

A. The degree to which the response meets the requirements of the RFP.
B. The cost of the equipment, services, and Offered payment terms.*
C. The functionality and ease of use of the Offered system.*
D. The ability of the system and provider(s) to meet the needs of the State.*
E. Past experience, history of similar projects, and capability of the company.**
F. The Offered delivery and installation schedule.**

* and ** items of equal weight.

5.12 Offeror Presentation

At the State's desire, following the initial Offer evaluation, the State may select some or all of the Offerors to respond to a secondary evaluation process. This process would typically involve the Offeror responding to questions surrounding the Offer, interviewing of the Project Manager, a structured presentation to the evaluation committee by the Offeror and Offeror's selected staff, and a period of time set aside for informal demonstration to end users.

The contents of the meeting are to be limited to the Offer and only the items and terms contained in the Offer. Mentioning, presenting, demonstration of, or any other reference to features or services not offered in the Offer during the presentation could be interpreted by the State as no cost additions to the Offer.

5.13 Multiple Awards

The state has a large number and variety of potential using agencies at locations throughout Arizona. In order to assure that any ensuing contracts will allow the state to fulfill current and further requirements, the state reserves the right to award contracts to multiple companies. The actual utilization of any contract will be at the sole discretion of the state. The fact that the state may make multiple awards should be taken into consideration by each potential contractor.

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5.14 Payment Schedule

A payment schedule is suggested as follows for installation and acceptance of each subsystem:

Table 5 - CAD Payment Schedule

Milestone	Payment
Functional Specifications Document	5%
Configuration Database (parameters loaded)	5%
Geofile Completed/Converted and Loaded	10%
Calibration Testing Complete	10%
Delivery and Installation of Fixed Equipment (Hardware)	15%
Functional Testing Complete	5%
Training Complete	5%
Due upon Go Live	10%
Successful Completion of (30 day) Final System Acceptance	25%

Table 6 - MDCS Payment Schedule

Milestone	Payment
Functional Specifications Document	5%
Delivery of Fixed Equipment (Hardware)	30%
Delivery of Software	10%
Installation of Software	5%
Installation of Fixed Equipment (Hardware)	5%
Functional Testing Complete	5%
Training Complete	5%
Due upon Go Live	5%
Successful Completion of (30 day) Final System Acceptance	20%

After both subsystems have been successfully completed, the Final system Acceptance the remaining 10% from each subsystem will be paid.

The request for payment must be made through the Project Manager on an approved estimate showing component breakdown of the work totaling the awarded contract price and the amount of work for each item completed at the time of the request.

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5.15 Project Management

The Offeror shall, upon award of the contract, assign an individual to oversee and have complete responsibility for the project. This "Project Manager" shall manage and direct the planning, delivery, installation, and performance verification. The State reserves the right to disapprove, with reasonable cause, any individual designated as Project Manager before or after he or she is appointed. In the event of disapproval, the Offeror has the sole responsibility to provide a Project Manager who is acceptable to the State. The Project Manager shall coordinate all work between the various parties involved (i.e., manufacturer, subcontractors, installation company, etc.), and provide immediate liaison between the Offeror, the State, and the States designated technical consultants. The Project Manager will also be responsible for coordinating with all other communications site Offerors to avoid interferences. The other Offerors will be required to provide a project manager and monthly status reports of their respective project schedules.

The Project Manager shall be available on site as required to perform the Offered work in conformance with the specifications of this RFP. The Project Manager shall have "Corporate Authority" to make decisions concerning all aspects of the project (i.e., contractual, financial, technical, etc.). These decisions shall be made in the field without lengthy "chain-of-command" formalities. The Project Manager shall be supported by the Offeror's engineering/technical staff as necessary, commensurate with the size and complexity of this project.

All costs and expenses associated with on-site meetings, supervision, and other duties of the Project Manager shall be the responsibility of the Offeror and included in the Offer. All costs and expenses associated with the support of the project by the Offeror's engineering/technical staff shall also be the responsibility of the Offeror and included in the Offer.

The qualifications of the Offered project manager should be included in the Proposal. However, the assigned Project Manager's name, title, qualifications, mailing address, and telephone numbers must be provided by the Offeror in written form within 15 days of the signing of the contract.

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Monthly or bi-monthly project meetings between State and the Offeror's Project Manager shall begin three weeks before commencement of any on-site work and continue for the duration of the project. The Offeror's Project Manager shall provide within three days of the meeting a written report to include the following minimum items:

A. Work performed.
B. Technical problems resolved.
C. Technical problems encountered.
D. Management issues resolved.
E. Management problems encountered.
F. Attendees.
G. Technical/management items discussed.
H. Action items.
I. Project schedule.
J. Fiscal Report.

5.16 Subcontractors

If the Offeror intends to engage a subcontractor or subcontractors to provide any part of the equipment or work required by this RFP, the Offeror shall provide each subcontractor with a complete copy of this RFP and all related materials to ensure the subcontractor's awareness and subsequent compliance with all pertinent requirements of the RFP.

The Offeror shall provide certification of this provision by identifying the subcontractors in their response to this RFP.

No part of the contract shall be sublet without the approval of the State. If the Offeror shall sublet any part of the contract, the Offeror shall be as fully responsible to the State for the acts and omissions of the subcontractor and of the persons directly or indirectly employed by the subcontractor as the Offeror is for the acts and omissions of persons employed by himself.

The State reserves the exclusive right to determine the relative importance of the work of each subcontractor, and, at its sole discretion, to require each subcontractor to appoint a Project Manager who shall meet all requirements established for the prime Offeror Project Manager, including the States right to disapprove their assignment to the project, and the requirements for being on-site.

5.17 Compensation of Offeror's Employees, Subcontractors, and Suppliers

The Offeror specifically warrants and agrees that Offeror will be solely and exclusively responsible for compensating any of the Offeror's employees, subcontractors, material men, and/or suppliers of any type or nature whatsoever and that no claims or liens of any type will

be filed against any property owned by the State arising out of or incidental to the performance of any services performed pursuant to this contract.

5.18 Radio Frequency Interference

The Offeror shall warrant that the installed System will not cause interference with any other installed radio system in any vehicle or fixed radio station. In the event such interference occurs, the Offeror agrees to take action to remedy such interference to the satisfaction of the State under the same terms and conditions as set forth under "Warranty."

5.19 Facility Tours

Arrangements will be made to conduct tours of the State's facilities in Phoenix and Tucson for all interested and qualified Offerors. The purpose of the tour will be to allow qualified Offerors to develop a better understanding of the infrastructure and specific requirements of this project. Marketing activities must not be conducted during the tour; the "tour guides" have no buying power since the State will make final purchase decisions. The specific tour arrangements will be announced at the pre-proposal conference. Anticipated date to tour the State's facilities will be immediately following the pre-proposal conference. Any travel or other expenses incurred for the pre-proposal conference and facility tour are to be borne by the Offeror.

5.20 Notice to Proceed

Following award of the Contract, the Offeror shall not commence any work or order any equipment (by its forces or those of subcontractors or suppliers) on this project until notified by the State in writing to proceed with the work under this contract. The date of this notification shall hereinafter be referred to as the date of Notice to Proceed.

5.21 Ordering of Equipment

The State understands that the Offeror will be responsible for ordering and delivering equipment. However, it requires that it be done in a timely manner. This means once a schedule has been agreed to and a Notice to Proceed has been issued equipment will be ordered in such a fashion that it arrives shortly before the installation is scheduled. In other words, if some specific piece of equipment that will not be installed until six months into the project, has a short lead time for ordering, that it not should not arrive on site days after the Notice to Proceed.

5.22 Reference to Time

All references to time in this RFP are in Mountain Standard Time. The Offeror is required to conduct all business with the State during normal business hours adhering to this local time zone, unless specifically authorized in advance. This time standard must be used in all communications with the State to help reduce confusion.

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5.23 Components and Connectivity Source

The State reserves the right to supply the Offeror's recommended hardware and/or connectivity solution in part or in whole. Response time and availability requirements discussed in this document shall remain in force regardless of who supplies the hardware or connectivity solutions. The Offeror shall discuss any limitations, difficulties, exceptions, or potential advantages that may occur should the State decide to supply the recommended hardware or connectivity solutions.

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6. SPECIAL TERMS AND CONDITIONS

6.1 Authority to Contract

This contract activity is issued under the authority of the DPS Procurement Officer. No alteration of any portion of the contract, any items or services awarded, or any other agreement that is based upon this contract may be made without express written approval of the DPS Procurement Officer in the form of an official contract amendment. Any attempt to alter any documents on the part of any ordering agency or any contractor is a violation of the contract and the Arizona Procurement Code. Any such action is subject to the legal and contractual remedies available to the state inclusive of, but not limited to, contract cancellation, suspension and/or debarment of the contractor.

6.2 Eligible Agencies (Statewide):

Any contract resulting from this solicitation shall be for the use of all State of Arizona departments, agencies and boards. In addition, eligible universities, political subdivisions and nonprofit educational or public health institutions may participate at their discretion. In order to participate in any resultant contract, a university, political subdivision, or nonprofit educational or public health institution must have entered into a cooperative purchasing agreement with the State Procurement Office as required by Arizona Revised Statutes §41-2642.

6.3 Contract Type (Term):

Fixed price term indefinite quantity.

6.4 Proposal Opening:

Proposals shall be opened on the date and time, and at the place designated on the cover page of this document, unless amended in writing by the Department of Public Safety. The name of each offeror shall be read at this time. Offers, modifications and all other information received in response to the Request for Proposals shall be shown only to authorized state personnel having a legitimate interest in the evaluation. After contract award, the proposals and evaluation documentation shall be open for public inspection.

6.5 Estimated Quantities (General):

This solicitation references quantities as a general indication of the needs of the state. The state anticipates considerable activity resulting from contracts that will be awarded as a result of this solicitation; however, the quantities shown are estimates only and the state reserves the right to increase or decrease any quantities actually acquired. No commitment of any kind is made concerning quantities and that fact should be taken into consideration by each potential contractor.

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6.6 Exclusive Contract:

Any contract resulting from this solicitation shall be awarded with the understanding and agreement that it is for the sole convenience of the State of Arizona. The state reserves the right to obtain like goods or services from another source when necessary. Off-contract purchase authorization (SPO Form 150) may be approved by the DPS Procurement Officer. Approval shall be at the exclusive discretion of the DPS Procurement Officer and shall be final. However, approval shall be granted only after a proper review and when deemed to be appropriate. Off-contract procurement shall be consistent with the Arizona Procurement Code.

6.7 Licenses:

Contractor shall maintain in current status all federal, state and local licenses and permits required for the operation of the business conducted b the contractor.

6.8 Proposal Bond

No proposal shall be considered or accepted unless accompanied by a deposit, cash, cashier's check, or certified check drawn on a bank or trust company insured by the Federal Deposit Insurance Corporation in an amount equal to not less than five percent of the total proposal price. Failure to comply with this proposal requirement will disqualify the Offeror, without exception.

In lieu of making the cash deposit, the Offeror may file a proposal bond executed by a corporate surety licensed under the laws of Arizona to execute such bonds, conditioned that the surety will upon demand forthwith make payment to the State upon said bond if the Offeror fails to execute the contract in accordance with their proposal and the RFP.

The State shall retain the proposal security if the successful Offeror fails to execute the contract and/or fails to give satisfactory surety within 20 days after the award. No proposal may be withdrawn or changed after the scheduled closing date and time for the receipt of proposals. A proposal may be withdrawn and resubmitted before the specified due date.

6.9 Performance Bond

The successful Offeror will procure and provide the Department of Public Safety with a Payment and Performance bond in the amount of the contract price.

The State will require the Offeror to furnish a bond covering the faithful performance of the contract and the payment of all obligations arising therein. The bond shall be purchased from an agency that meets the following requirements:

A. A financial rating of A7 or better from BEST Rating Company.
B. Licensed and admitted to do business in the State of Arizona

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6.10 Insurance

Without limiting any liabilities or any other obligation of the contractor, the contractor shall purchase and maintain in a company or companies lawfully authorized to do business in the State of Arizona, and rated at least "aVII" the current A.M. Best's, the minimum insurance coverage below:

Commercial General Liability, with minimum limits of $1,000,000.00 per occurrence, and an unimpaired products and completed operations aggregate limit and general aggregate minimum limit of $2,000,000.00. Coverage shall be at least as broad as the Insurance Service Office, Inc., form CG00010196, issued on an occurrence basis, and endorsed to add the State of Arizona and Arizona Department of Public Safety as an additional insured with reference to this contract. The policy shall include coverage for:

Bodily Injury;

Broad Form Property Damage (including completed operations);

Personal Injury;

Blanket Contractual Liability;

Products and Completed Operations, and this coverage shall extend for one year past acceptance, cancellation or termination of the services or work defined in this contract;

Fire Legal Liability;

Business Automobile Liability, with minimum limits of $1,000,000.00 per occurrence combined single limit, with Insurance Service Office, Inc. Declarations to include symbol one (any auto) applicable to claims arising from bodily injury, death or property damage arising out of the ownership, maintenance or use of any auto. The policy shall be endorsed to add the State of Arizona and Arizona Department of Public Safety as an additional insured with reference to this contract.

Worker's Compensation (Coverage A): statutory Arizona benefits;

Employer's Liability (Coverage B): $ 500,000.00 each accident;
$ 500,000.00 each employee/disease;
$ 1,000,000.00 policy limit/disease.

Policy shall include endorsement for all state coverage for state of hire.

The State of Arizona and Arizona Department of Public Safety reserves the right to request and receive certified copies of all policies and endorsements within ten calendar days of contract signature. Certificates of insurance acceptable to the State of Arizona and Arizona Department of Public Safety shall be issued and delivered prior to the commencement of the

work defined in this contract, and shall identify this contract and include certified copies of endorsements naming the State of Arizona and the Arizona Department of Public Safety as additional insured for liability coverages. The certificates, insurance policies and endorsements required by this paragraph shall contain a provision that coverages afforded will not be canceled until at least 50 days prior written notice has been given to the State of Arizona and Arizona Department of Public Safety. All coverages, conditions, limits and endorsements shall remain in full force and effect as required in this contract.

Failure on the part of the contractor to meet these requirements shall constitute a material breach of contract, upon which the Arizona Department of Public Safety may immediately terminate this agreement or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, and all monies so paid by the Arizona Department of Public Safety shall be repaid by the contractor upon demand, or the Arizona Department of Public Safety may offset the cost of the premiums against any monies due to the contractor. Costs for coverages broader than those required or for limits in excess of those required shall not be charged to the State of Arizona or Arizona Department of Public Safety. Contractor and its insurer(s) providing the required coverages shall waive their rights of recovery against the State of Arizona, its departments, employees and officers, agencies, boards and commissions.

6.11 Delivery:

Equipment delivery shall be made within 90 days of receipt of the purchase order. If delivery is not completed within the required 90 days the state reserves the right to purchase the item(s) specified on the open market.

6.12 Term of Contract (1 Year from Award)

The term of any resultant contract shall commence on the date of award and shall continue for a period of one (1) year thereafter, unless terminated, canceled or extended as otherwise provided herein.

6.13 Contract Renewal:

The contract shall not bind nor purport to bind the state for any contractual commitment in excess of the original contract period. The Department of Public Safety reserves the right, upon mutual agreement between the Department of Public Safety and the successful offeror, to renew the contract for supplemental periods of up to a maximum of forty-eight (48) months or a portion thereof. If such rights are exercised, all terms, conditions and provisions of the original contract shall remain the same and apply during the renewal period unless otherwise stipulated.

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6.14 Prices

Prices shall include and separately itemize system engineering, equipment, equipment delivery, installation, performance verification, operation and maintenance training, and warranty priced for one year and valid for five years (annual renewal option).

Prices shall be specified on the attached proposal sheets (Section 17). Equipment quantities shown on the proposal sheets are estimated and subject to adjustment after proposal award and prior to contract signing.

6.15 Price Adjustments (After 1 Year)

The Department of Public Safety may review a fully documented request for a price increase only after the contract has been in effect for one (1) year. A price increase adjustment shall only be considered at the time of a contract extension and shall be a factor in the extension review process. The Department of Public Safety shall determine whether the requested price increase or an alternate option is in the best interest of the state.

The price increase adjustment, if approved, will be effective upon the effective date of the contract extension. Price reductions will become effective upon acceptance by the state.

6.16 Discount Rates:

The contractor(s) shall be responsible for disclosing and honoring all applicable discount rates contained herein (i.e. Purchasing Card, Electronic Ordering Systems, Quantity Purchase, Special Educational and Prompt Payment discounts) to the Department of Public Safety. Disclosure shall be made during all verbal and written communications, order confirmations, and on invoicing activities made under the resultant contract(s). Failure to disclose and include all applicable discount rates to contracted customers may result in contract cancellation.

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6.17 Safety Standards:

All items supplied on this contract must comply with the current applicable occupational safety and health standards of the State of Arizona Industrial Commission, The National Electric Code, and The National Fire Protection Association Standards.

6.18 Current Projects:

All systems and components thereof offered in response to this solicitation shall be new, not remanufactured or refurbished and in current and ongoing production; shall have been formally announced for general marketing purposes; shall be a model or type currently functioning in a user (paying customer) environment; and capable of meeting or exceeding all specifications and requirements set forth in this solicitation. The offeror shall have been in business a minimum of three years selling this class of equipment. Components used in the equipment shall be only those specified in the vendor equipment manual. Bidders shall submit evidence of compliance to this section in writing with their bid. Failure to supply this information with the bid may result in the bid being considered non-responsive.

6.19 Serial Numbers:

The contract is for equipment on which the original manufacturer's serial number has not been altered in any way. Throughout the contract term, the state reserves the right to reject any altered equipment.

6.20 Warranty (12 Months):

All equipment supplied under this specification shall be fully guaranteed by the contractor for a minimum period of twelve (12) months from the date of acceptance by the ordering agency. Any defects of design, workmanship, or materials that would result in non-compliance with the contract specification shall be fully corrected by the contractor (including parts, labor and all shipping charges) without cost to the agency. Bidders shall include a statement about this fact in their complete and exclusive warranty declaration (see attachment).

6.21 Defective Products:

All defective products shall be replaced and exchanged by the contractor. The cost of transportation, unpacking, inspection, repacking, reshipping or other like expenses shall be paid by the vendor. All replacement products must be received by the state within ten (10) days of initial notification.

6.22 Maintenance:

Bidders shall furnish a list of authorized OEM maintenance/service centers with bid package.

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6.24 Inventory:

The State of Arizona has an ongoing requirement for the material indicated in this solicitation. It is an express condition of any award that a contractor shall maintain a reasonable stock on hand for delivery to the requesting agency. Failure to maintain such a stock may result in contract cancellation.

6.25 Product Discontinuance (Categories):

The State may award contracts for particular products and/or models of equipment as a result of this solicitation. In the event that a product or model is discontinued by the manufacturer, the state at its sole discretion may allow the contractor to provide a substitute for the discontinued item. The contractor shall request permission to substitute a new product or model and provide the following:

A formal announcement from the manufacturer that the product or model has been discontinued.
Documentation from the manufacturer that names the replacement product or model.

Documentation that provides clear and convincing evidence that the replacement meets or exceeds all specifications required and remains within the same category defined by the original solicitation.

Documentation that provides clear and convincing evidence that the replacement will be compatible with all the functions or uses of the discontinued product or model.

Documentation confirming that the price for the replacement is the same as or less than the discontinued model.

As applicable, if a sample is requested, notification will be given whether the sample is acceptable, or is rejected, a reason shall be given.

6.26 Ordering Process:

Upon award of a contract by the Department of Public Safety, any designated agency may procure the specific material and/or service awarded by the issuance of a contract release order to the appropriate contractor. Each contract release order must cite the correct DPS contract number. The award of a contract shall be in accordance with the Arizona Procurement Code and all transactions and procedures required by the code for public bidding have been complied with. A contract release order for the awarded material and/or service that cites the correct DPS contract number is the only document required for the agency to order and the contractor to deliver the material and/or service.

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Any attempt to represent any material and/or service not specifically awarded as being under contract with the Department of Public Safety is a violation of the contract and the Arizona Procurement Code. Any such action is subject to the legal and contractual remedies available to the state inclusive of, but not limited to, contract cancellation, suspension and/or debarment of the contractor.

6.27 Shipping F.O.B. Statewide:

Prices shall be F.O.B. Destination to any delivery location in the State of Arizona, delivered to the specified receiving point as required by the customer agency at the time of order. Contractor shall retain title and control of all goods until they are delivered, received and contract of coverage has been completed. All risk of transportation and all related charges shall be the responsibility of the contractor. All claims for visible and concealed damage shall be filed by the contractor. The State will notify the contractor promptly of any damaged goods and shall assist the contractor in arranging for inspection.

6.28 Billing:

All billing notices shall include delivery time, and contractual payment terms. Items are to be identified by the name, model number, contract number, line item number, and serial number if applicable. Any contract release order issued by the requesting agency shall refer to the contract number and line item number(s).

6.29 Usage Report:

The contractor shall furnish DPS a usage report delineating the acquisition activity governed by the contract. The format of the report shall be approved by the state and shall disclose the quantity and the dollar value of each contract item by individual purchasing unit.

The usage report shall be due at the end of each three (3) month period of the contract term.

6.30 Contraband:

Any person who takes into or out of, or attempts to take into or out of a correctional facility or the grounds belonging to or adjacent to a correctional facility, any item not specifically authorized by the correctional facility shall be prosecuted under the provisions of the Arizona Revised Statutes. All persons, including employees and visitors, entering upon these confines are subject to routine searches of their person, vehicles, property or packages.

DEFINITION - A.R.S. §13-2501

Contraband means any dangerous drug, narcotic drug, intoxicating liquor of any kind, deadly weapon, dangerous instrument, explosive or any other article whose use or possession would endanger the safety, security, or preservation of order in a correctional institution or any

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person therein. (Any other article includes any substance which could cause abnormal behavior, i.e. marijuana, non-prescription medication, etc.)

PROMOTING PRISON CONTRABAND - A.R.S. §13-2505

A person, not otherwise authorized by law, commits promoting prison contraband:

By knowingly taking contraband into a correctional facility or the grounds of such a facility; or

By knowingly conveying contraband to any person confined in a correctional facility; or

By knowingly making, obtaining or possessing contraband while being confined in a correctional facility.

PROMOTING PRISON CONTRABAND IS A CLASS 5 FELONY.

6.31 Post Award Meetings:

Upon award, any or all contractors should avail themselves to participating in post award meetings with state and political subdivision users and buyers.

Meetings may be held either as many as two (2) times in metropolitan ("metro") Phoenix during each contract year or once within metro Phoenix and once in another user city within the state each contract year.

The meetings may include a pre-conference with state personnel to discuss mutual contractual responsibilities and other performance related items.

6.32 State Contract Show Availability:

As a statewide contractor, the vendor is eligible to participate in an exhibition of products and services for the state agency and eligible political subdivision personnel in a centralized event. The show has been in place since 1984 and regularly attracts over 130 booths and 500 state contract users.

7. EQUIPMENT INSTALLATION REQUIREMENTS

A paragraph-by-paragraph response shall be provided indicating compliance with the described requirements for this section of the RFP. If the Offeror takes exception to a specific paragraph, they shall fully describe their exception in the appropriate section of the proposal.

7.1 General

The equipment installation required by this RFP includes the following described items as well as other attachments, hardware, software, and procedures as may be required to ensure a completed installation which is in accordance with the standards of good engineering practice and all building codes and ordinances in effect at the sites delineated in this RFP.

The Offeror shall coordinate the installation of remote mountain-top site equipment with DPS's technical staff who will be responsible for the actual physical installation and wiring hook-up. Offeror's technicians should be available to assist and ensure that all equipment is installed properly, and according to Offeror standards.

Wiring of AC circuits normally associated with conventional buildings shall be provided by the State at the Communications Center and other facilities. Wiring required for connecting the equipment to the power outlets or any special wiring shall be the responsibility of the Offeror except at mountain-top remote sites.

Specific installation practices set forth herein shall be followed unless the Offeror feels that they are not the best available practices or do not conform to code, in which case the Offeror shall state this in the response.

The Offeror shall install the equipment and connect the units to commercial/emergency AC power and uninterruptible power sources. The Offeror shall connect State furnished equipment to the Offeror-supplied equipment and install bonding and grounding conductors where needed.

The Offer price shall include installation hardware, brackets, braces, fasteners of all kinds, wiring, ancillary devices, procedures, and services required to install and/or interface components to provide a complete operating System that fulfills the requirements of this RFP.

The Offeror is required to adhere to FCC and all local codes and ordinances in all matters pertaining to the work.

Cabling, communications outlets, power wiring, system grounding, conduit facilities, and equipment rooms shall be installed in accordance with national standards and national and local codes. Minimum standards used in the installations shall include the following:

A. ANSI/TIA/EIA-568 Commercial Building Telecommunications Wiring Standard.

B. ANSI/TIA/EIA-569 Commercial Building Standard for Telecommunications Pathways and Spaces.

C. ANSI/TIA/EIA-606 Administration Standard for the Telecommunications Infrastructure of Commercial Buildings.

D. ANSI/TIA/EIA-607 Commercial Building Grounding and Bonding Requirements for Telecommunications.

E. BICSI Building Industry Consulting Service International, Telecommunications Distribution Methods Manual.

F. NEC National Electrical Code (NFPA-70).

G. FCC Federal Communications Commission Rules and Regulations, Parts 68 and 15.

All equipment and component parts installed shall be new, shall meet the requirements of this specification, and shall be in operable condition at the time of delivery.

The installation work shall be approved by the State prior to commencement of a particular phase of work on a site-by-site basis. The Offeror shall provide finalized descriptions and layout drawings showing the Offered installations at each site at least 14 days prior to beginning work at that site. No work shall commence without written approval from the State.

7.2 Equipment Mounting

Rack mounting for LAN equipment or any other data communications equipment (i.e., modems, routers, etc.) requiring assisted installation may be accomplished by either of two methods: (1) special floor only mounting; or (2) a combination of floor and top mounting. The Offeror shall Offer the recommended method and provide an option for any other recommended method. The State shall select the preferred method prior to contract award. Racks shall not exceed 90 inches in height.

7.3 Facility Familiarity

Offerors shall inform themselves fully as to all facilities for delivering, storing, placing, handling, and disposing of materials. All aspects of the installation shall be planned and executed in a professional manner.

7.4 Site Access

Access to the sites shall require prior coordination with the DPS Project Manager or their designate.

7.5 Cutover Plan

The Offeror shall describe a draft cutover plan in the RFP response. This plan shall include a chronological chart (Gantt-type format) with the tasks to be accomplished and the time for achievement of each task shown. A smooth operational transition from the old MDT system

and card report system to the new system is key. The Offeror shall be required to implement the plan as part of the written procurement contract.

7.5.1 Detailed Design Plan

The Offeror shall revise the draft cutover plan into a more detailed cutover plan as part of the detailed design process following the Contract award and Notice to Proceed. The plan shall be approved by the State before commencement of installation.

The detailed cutover plan shall include a narrative description of the sequential cutover steps and a clear delineation of which tasks are the responsibility of the Offeror, which tasks are the responsibility of the State, and which tasks are the responsibility of others (i.e., the local telephone company).

The existing communications system shall remain operational during the cutover phase. The Offeror shall provide a phased implementation plan that will ensure that no current dispatch function is negatively impacted or impaired during system cutover to the new communications system.

7.5.2 Final Plan

The Offeror shall provide a finalized cutover plan no later than 30 days prior to equipment installation. The plan shall be approved by the State before commencement of installation.

7.6 Quality Assurance Requirements

This RFP requires the establishment of a quality control system by the Offeror to ensure that hardware and software supplies and/or services meet the quality standards explicitly and implicitly specified in this RFP. The quality control system, including procedures, is subject to surveillance by the State. Adherence to the quality control sub-specification and any procedure or document in implementation thereof shall not release the Offeror from any other requirements in this RFP.

The quality control system and procedures shall be designed by the Offeror. The Offeror's procedures used to implement the requirements of this sub-specification shall be subject to the approval of the State. In the event of disapproval, the Offeror is solely responsible for devising new procedures that meet with the explicit approval of the State.

The quality control system shall ensure that adequate control of quality is maintained throughout all areas of contract performance, including, as applicable, the receipt, identification, stocking, and issuance of material, the entire physical process of manufacture, packaging, shipping, storage, installation, and maintenance, and processes of software development including design structure, coding, testing, integration, and implementation.

All equipment, supplies, and services under the contract, whether manufactured or performed at the Offeror's facility or at any other source, shall be subject to control at such points as necessary to ensure conformity with the specifications and contractual requirements. The System shall provide for the prevention and ready detection of discrepancies and for timely and positive corrective action. The Offeror must make objective evidence of quality performance readily available to the State.

7.6.1 Installation Support

The Offeror must provide specialized technical service personnel in areas such as communications, computer hardware and software, equipment service and repair, etc., as required by the project work plan. All technical service personnel must be fully qualified in their respective disciplines. All costs associated with the provision of the technical support services, if any, are to be included in the proposal.

7.6.2 Description of Procedures

The Offeror shall provide and maintain a description of procedures for quality control. To the extent necessary, written inspection and test procedures shall be prepared to supplement the applicable drawings and specifications, and shall make clear the manner in which such inspection and test procedures are to be used.

Software development shall include model statements, data-flow diagrams, data dictionary, process specification, and object-relationship diagrams. The Offeror shall employ all accepted software development criteria and procedures as outlined and defined by ANSI/IEEE Standard Numbers 730, 828, 829, 830, 1008, and 1012. The description of the quality control system and all applicable inspection and test procedures shall be available to the State prior to system acceptance.

7.6.3 Measuring and Testing Equipment

To the extent that the work required to comply with the specifications of the RFP dictates and unless otherwise specified in the contract, the Offeror shall provide any and all other measuring and testing devices necessary to ensure that all equipment supplied under this contract conforms to all applicable specifications and contract requirements. These devices shall be calibrated against measurement standards or designated measuring equipment at established periods to ensure continued accuracy. The Offeror shall prepare and maintain a written schedule for the maintenance and calibration of such equipment based on type, purpose, and degree of usage.

7.6.4 Use of Offeror's Inspection Equipment

The Offeror's gauges and measuring and testing devices, including electronic measuring instruments to determine data rate and effective throughput as well as software diagnostic devices, shall be made available for reasonable use by the State at no cost when required to determine conformity with contract requirements. If

conditions warrant, the Offeror's personnel shall be made available for operation of such devices and for verification of their accuracy and condition. Any such use shall be under the direct supervision of the Offeror or its assigned representative.

7.6.5 Control of Subcontracted Supplies

The Offeror is solely responsible for ensuring that all supplies and services to apply to the contract or subcontracts conform to all specifications and contract requirements, whether manufactured or processed by the Offeror or procured from subcontractors.

7.6.6 Subcontract Data

The Offeror shall ensure that applicable requirements are properly included or referred to in all subcontracts for supplies, equipment, and services and shall contain at least the following information.

1. The applicable contract number and the name and address of subcontractor and the consignee.
2. A clear description of the supplies, equipment, and services ordered, including:
   a) Specifications, drawings, process requirements, preservation and packaging requirements, classification of defects, inspection instructions, and other necessary data.
   b) Requirements for qualification.
3. Data necessary when provision is made for direct shipment from the subcontractor to the State sites.

7.6.7 Review and Processing of Subcontracts

All subcontracts and reference data for supplies applying to the contract or any subcontract shall be available for review by the State's Project Manager or their agent to determine compliance with the requirements for the control of such purchases. Copies of subcontracts required for this purpose shall be furnished in accordance with the instructions of the Project Manager.

7.6.8 Receiving Inspection

Subcontracted supplies shall be subject to inspection after receipt, as necessary, to ensure conformity with contract requirements. In conducting such inspection, consideration shall be given to the controls exercised by the subcontractor at the source and evidence of sustained quality conformity. The Offeror shall provide procedures for withholding from use all incoming supplies pending completion of required tests or receipt of necessary test reports, except that supplies may be released when under positive control. The Offeror shall initiate corrective action with their subcontractors upon receipt of non-conforming supplies as indicated by the nature and frequency of the nonconformity.

7.6.9 Special Processes

When approval or certification of processes, equipment, or personnel is required under the contract, the Offeror shall ensure that they and their subcontractors are fully qualified prior to requesting approval.

7.6.10 Inspection of Completed Supplies

The Offeror shall inspect completed supplies as necessary to ensure that contract requirements have been met.

7.6.11 Sampling Inspection

Any sampling procedures (in addition to those required by the Contract) used by the Offeror to determine the acceptability of supplies shall afford reliable assurances of the maintenance of acceptable quality levels.

7.6.12 Indication of Inspection Status

The Offeror shall maintain a system for identifying the status of supplies. Identification may be accomplished by means of stamps, tags, routing cards, move tickets, tote box cards, or other normal control devices.

7.6.13 Non-Conforming Supplies

Procedures shall be provided for the control of non-conforming supplies, including procedures for the identification, presentation, and disposition of reworked, repaired, or waived supplies. The acceptance of non-conforming supplies is a prerogative of and shall be as prescribed by the State. All non-conforming supplies shall, when practicable, be diverted from normal material movement channels. The non-conforming supplies shall be positively identified to prevent use until disposition is made. Holding areas mutually agreeable to the Offeror and the State shall be provided. The State shall not accept responsibility for non-conforming materials or supplies or any other materials prior to acceptance of the system.

7.6.14 Material Furnished by the State

When material or information is furnished or supplied for modification by the State, the Offeror's procedures shall include at least the following:

A. Examination upon receipt, consistent with practicability, to detect damage in transit.
B. Inspection for completeness and proper type.
C. Periodic inspection and precautions to ensure adequate storage conditions and to guard against damage from handling and deterioration during storage.

D. Functional testing, either prior to or after installation, or both, as required by the contract to determine satisfactory operation.

7.6.15 Damaged Material Furnished by the State

The Offeror shall report promptly in writing to the State any material furnished by the State found damaged, malfunctioning, or otherwise unsuitable for use. In the event of damage or malfunction during or after installation, the Offeror shall determine and record probable cause and necessity for withholding material from use.

7.6.16 Evidence of Approvals

When engineering inspections, tests, or approvals by the State are contractually required on supplies, such as engineering models, qualification test articles, pre-production test articles, and "first articles," these supplies shall be subject to the requirements of this specification. The Offeror shall maintain records of such approvals.

7.6.17 Storage

The Offeror shall provide adequate procedures for storage and control of supplies to be used under the contract to ensure preservation and treatment in accordance with applicable requirements. Procedures shall define inspections to be conducted at scheduled intervals. The State will cooperate with the Offeror to offer local storage facilities, to the extent that they are available, at no cost to the Offeror, provided the State is held harmless for all risk of damage or loss.

7.6.18 Quality Control Records

The Offeror shall maintain adequate records of inspections and tests throughout all stages of contract performance, including checks made to ensure accuracy of inspection and testing equipment and other control media. All quality control records shall be available for review by the State and/or their agent, and copies of individual records shall be furnished to them and/or their agent when requested. The Offeror expressly agrees to furnish records requested within ten business days of notification by the State and/or their agent.

7.6.19 Corrective Action

The Offeror shall take prompt action to correct conditions that might result in defective supplies or services. Use shall be made of feedback data generated and furnished by user activities, as well as that generated in the Offerors facility.

7.6.20 Resistance to Interference

Interference as used in this RFP is defined to mean radio frequency or power line conducted emissions, including susceptibility to such, causing noise or degradation to installed radio and audio equipment or to the operation of other electronic systems. The system supplied must not suffer from interference or measurable performance degradation from use of installed console devices, public safety radio transceiver equipment, microwave communication systems, other installed data processing equipment, or any other devices present in the system's operational environment.

7.6.21 Emissions Criteria

The system supplied shall not cause interference to the existing radio, security, and closed circuit television communications systems, installed communications console equipment, or other data processing equipment present in the operational environment, and, in addition, shall comply with all applicable FCC standards as applied to data processing equipment.

7.6.22 Remedy

In the event interference is caused or received as described above, the Offeror is solely responsible for its correction. Failure of the Offeror to correct an interference problem will be considered a breach of contract and will result in termination of the contract and execution of the performance bond.

7.6.23 Other System Equipment

Installation of all other system equipment will be the sole responsibility of the Offeror, and will be accomplished in such a way as to cause the least impact or disruption to daily operations.

7.6.24 Equipment Installation Standards

Installation of all equipment will conform to best industry practices for like equipment. To ensure reliable operation and to enhance equipment service, repair, and replacement, the State may require that equipment installations conform to standards that exceed normal industry practices. Installation standards to be followed will be prepared by the State's Project Manager and will be reviewed with the Offeror for suitability.

7.6.25 Scheduling of Equipment Installation

Offerors should be aware that installation of equipment at all sites must be scheduled. Scheduling of equipment installations will be done in a way that best meets the needs of the State. The Offeror and their subcontractors must recognize that circumstances may arise which requires the rescheduling of equipment installations.

7.6.26 Inspections

The State's Project Manager will designate personnel who will perform inspections of the installations, as desired. Unsatisfactory installations shall be corrected by the Offeror without additional compensation.

7.6.27 Installation Crew(s)

For purposes of continuity & quality control, the Offeror shall make a reasonable effort to maintain the same installation crew(s) through completion of each type of installation, such as in-vehicle, back-office equipment, RF site equipment, etc.

7.6.28 Crew Approval

All individuals offered as installers shall be approved by the State's Project Manager prior to the commencement of installations. The State's Project Manager reserves the right to reject any individual deemed unqualified; or dismiss any individual not complying with existing standards.

7.6.29 Installation Location

The Offeror shall describe in their response both the specific company performing all installations as well the location of the installation or where the installation shall take place in the case of vehicular installations.

7.6.30 Other Equipment Relocation

It is envisioned that some installations will require relocation of the existing radio or other equipment order to accommodate the units. The Offeror shall include a clearly documented and reasonable amount of effort for these relocations within this response.

7.6.31 Site Clean Up Requirements

The Offeror will be required to perform clean up tasks at the end of each workday at each site where equipment is being installed. The condition of each site will, at the end of each day, be restored as nearly as possible to its original condition. Items that must be left for the next day's work will be stored so that they will not impair normal operations.

7.6.32 Responsibility for Offeror Equipment

Offerors will assume complete responsibility for all tools, test equipment, or other items that are the property of the Offeror and are being used during equipment installation. The State will not be responsible for lost or damaged items that the Offeror may leave at work sites for their own convenience.

7.6.33 Testing of Equipment and Construction

A. Materials of construction, particularly those upon which the strength and durability of structures may depend, shall be subject to inspection for suitability for the use intended.

B. Quality assurance and control shall be maintained in a manner consistent with industry practices and as specified.

7.6.34 Salvaged Material

All material, of whatever kind, encountered in and taken from the site of the work shall be the property of the State and shall be stored by the Offeror at the direction of the State's Projector Manager. Such storage will be provided by the State.

7.6.35 Protection of Work and Property

A. The Offeror shall continuously maintain adequate protection of all work from damage, and shall protect the State and/or any other property from injury or loss arising in connection with the contract. He shall adequately protect adjacent property as provided by law and the contract.

B. The Offeror shall provide and maintain all passageways, public areas, guard fences, lights, and other facilities for protection required by public authority and local conditions. This requirement applies only to site(s) that are controlled by the Offeror.

C. The Offeror shall, without extra charge, erect, maintain, and finally remove strong and suitable barriers, and, during the night time, such lights as will prevent any accident or harm to life, limb, or property in consequence of such digging up, use, or occupancy of any streets, avenues, highways, public grounds, or facilities.

D. The Offeror shall, at their own expense, protect, restore, and make good, as may be necessary, all buildings, foundations, and fences injured in the progress of the work. The Offeror shall protect all private and corporate property, such as gas mains, telephone lines, telephone or telegraph poles, conduits, etc., interfering with the work, notifying the several owners of the work to be done, and arranging for the future disposition of their property.

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8. COMPUTER AIDED DISPATCH SYSTEM REQUIREMENTS

A paragraph-by-paragraph response shall be provided indicating compliance with the described requirements, specifications and functions for this section of the RFP. If the Offeror takes exception to a specific paragraph, they shall fully describe their exception in the appropriate section of the proposal.

8.1 Server Requirements

The Computer Aided Dispatch (CAD) system shall consist of all computer hardware, interface hardware, data communications hardware, cables, terminals, workstations, printers, files, system software, communications software, application software, etc., necessary to meet the functional requirements. All hardware, software, and ancillary equipment and services necessary and required to facilitate the functional interfaces to E9-1-1 telephone systems, TDD, Arizona Criminal Justice Information System (ACJIS) and the Offered Mobile Data Computer System (MDCS), which includes an optional Automatic Vehicle Location (AVL) component.

The system shall be sized to retain all CAD information (historical unit and incident activity) on-line for a minimum of 180 days before being archived to DVD or other Offered storage media. DPS desires to maintain CAD information online for longer periods. Offerors will specifically address storage requirements and the cost associated with following retention periods:

A. One year.
B. Eighteen months.
C. Two years.

The longer retention times are desired to enable easier on-line access to CAD information for management reporting and historical access to past incident and unit activity records. The Offeror shall explain the methodology Offered for accessing historical incident and unit information and its affect on CAD system response time and storage requirements.

The Department of Public Safety desires to procure a system that will meet the current needs and, more importantly, will support its CAD requirements for at least the next ten years and beyond. The system shall meet the following requirements at a minimum

8.1.1 Model

The computer system Offered shall be the manufacturer's most recent delivered model. Equipment at the middle or near the end of its life cycle will not be acceptable.

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8.1.2 Scalability

The Offered system shall be directly expandable by adding hardware. The Offeror shall describe the scalability and expandability, indicating the related costs of the Offered system in terms of processors, main computer memory, disk drives, peripheral devices, and connectivity.

8.1.3 Mounting

Offerors are required to provide all necessary racks, tables, stands, or other required mounting facilities for the Offered systems, consoles, communications, and/or network equipment consistent with their Offered configuration(s).

8.1.4 Architecture

System components should be microcomputer-based and connected to each other via a LAN wherever possible.

8.1.5 LAN Connectivity

The LAN and number of system components must be expandable to allow for future system expansion.

8.1.6 Interfaces

Mobile Data Computer (MDC) and Field Based Reporting (FBR) systems should be available to allow seamless expansion and connectivity to these and other modules as specified in this document.

8.1.7 Backups

The CAD system should include an option for an off-site backup server(s).

8.1.8 Phoenix Installation

One or more CAD system servers shall be installed in the Phoenix Dispatch Center's equipment room. The Phoenix Dispatch Center is located at the Arizona State Highway Patrol (AZHP) complex in downtown Phoenix.

8.1.9 Tucson Installation

Optionally, depending on whether a distributed or centralized CAD system hardware configuration is chosen, one or more CAD system servers shall be installed in the Tucson Dispatch Center's equipment room. The Tucson dispatch center is located at the AZHP complex in downtown Tucson.

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8.1.10 Flagstaff Installation

An optional, separately priced, CAD system server(s) should be offered for the Flagstaff Dispatch facility depending on whether a distributed or centralized CAD system hardware configuration is chosen. DPS is currently planning to bring the Flagstaff facility on line with the Offered system as soon as budgetary feasibility allows. The Flagstaff dispatch center is located at the AZHP complex in Flagstaff.

8.1.11 Fault Tolerance

A fault tolerant or redundant CAD system is highly desirable.

8.1.12 Control Console

At least one operator control console/workstation with associated display shall be supplied to operate and maintain each CAD server facility.

8.1.13 Remote Access

The CAD server(s) shall be accessible via remote, dial up, or Internet facilities for diagnostics, maintenance, and configuration of the system. This access must be strictly controlled so that unauthorized users are not able to access the system. At a minimum, a Virtual Private Network (VPN) or equivalent secure access is required.

8.1.14 Interface Connections

Offerors shall provide all necessary hardware, software, and cabling for connecting the CAD server(s) and workstations to each other and the CAD server(s) to required interfaces.

8.1.15 WAN connectivity

The State will provide all required WAN communications. Offerors must include specifications on the WAN requirements for accessing the CAD servers and other interfaced systems from the Tucson and Flagstaff dispatch facilities and other remote locations. The ACJIS message switch, which will not be replaced as part of this RFP process, is located in the Phoenix, AZHP complex.

8.1.16 System Reliability

The system shall operate on redundant or fault tolerant systems/servers in order to provide the required system availability of 99.5 percent when measured on a 24-hour per day, seven day a week basis for 365 days. Processor, disk storage, and power supply redundancy may be required in order to achieve the desired availability and protection of information. The system should be configured such that operating a training component and/or running reports will not affect system response time.

8.1.17 Quantity Terminals Supported

The CAD system shall be configured to support the minimum terminals/workstations specified in Table 2 – CAD Workstations by Type. Additionally, up to 50 PCs may access the CAD system for management and tactical reporting purposes. Offerors should describe any secure dial-up or Internet/Intranet access available through their Offered system.

8.1.18 Response Time

The computer system (hardware, software, networking, and all ancillary components) shall support all CAD activities with a sub-second response time in 95 percent of all transactions. When the system is loaded with transactions in the maximum busy peak hour volume specified in Table 3 – Dispatch Center Statistics, the response time will be under two seconds 97 percent of the time. This response requirement includes verification of entered addresses against the CAD geo-file. At no time shall the CAD system response time exceed ten seconds on any transaction. The State will either conduct peak performance testing for a period of three hours under peak loads to ensure that these requirements are met or observe and certify the peak performance testing of the selected Offeror.

Response time is defined as the time between the depression of the last keystroke or pointing device activation (e.g., click) and the appearance on the workstation/terminal of the last character of the initial response (e.g., first page, pop-up window, etc.). Offerors shall describe how their solution meets the above response time and how they intend to measure response time if different than described herein. The State reserves the right to review and approve the methods used to measure response time.

An incident is defined as the receipt of a request for service, through either E9-1-1 or other means, leading to the dispatching of public safety personnel. Public safety personnel, however, are not necessarily dispatched to all incidents, (e.g., incidents that occur during severe storms). These "non-dispatched" incidents should also be included in the peak performance testing.

8.1.19 Disk Storage Subsystems

Disk capacity shall be sized to accommodate storage of 50 percent more than the combined current calls for service volumes as indicated in Table 3 – Dispatch Center Statistics. As previously indicated, the State requires that CAD information be retained on-line for a minimum period of 180 days before being archived to DVD or other Offered storage media. The disk storage systems shall be sized to retain all CAD information on-line for a minimum of 180 days before being archived to DVD or other Offered storage media. Offerors will specifically address storage requirements and the cost associated with following retention periods:

a) One year.
b) Eighteen months.
c) Two years.

Offerors are responsible for ensuring that the Offered system meets these requirements. Offerors shall indicate the expandability of the Offered disk systems and any methodology used to provide redundancy. The systems should employ sufficient disks and required disk controllers to minimize points of failure.

If RAID technology is offered, the Offeror will indicate the industry standard RAID specification level to which the subsystem complies. The subsystem must be hardware-based, as software-based "RAID-like" solutions are not acceptable. If RAID 5 is specified, the disk array will include at least four independent physical drives. The Offered disk controllers shall be RAID compliant with the level Offered and shall incorporate on-board cache memory. The Offeror will indicate if their solution incorporates any "extra" disks as "hot spares" which are automatically brought online if a disk in the array fails. Furthermore, Offerors will discuss if their Offered system will bring a "hot spare" online and automatically and transparently rebuild the data from the failed device to the spare.

The Offeror is to provide any external array chassis for disk drives that are not incorporated within the available expansion bays of the computer system/server. Management software for the RAID system is to be specified and provided by the Offeror. Offeror shall also provide costs for increase storage capacity, spares, and upgradeable expansion.

8.1.20 Operating System Requirements

The CAD system shall indicate the operating system(s) used within their Offered configuration and discuss the capabilities of the Offered operating system(s). Ideally the system utilize an industry recognized, proven and robust operating system. The current releases of Microsoft Windows or Unix environments are the preferred operating systems, but are not mandatory.

8.1.20.1 Application Management

Determine which applications should run in what order and how much time should be allowed for each application.

8.1.20.2 Memory Management

Efficiently manage the sharing of internal memory among multiple applications.

8.1.20.3 I/O Management

Handle input and output to and from attached hardware devices, such as hard disks, network equipment, printers, and dial-up device, etc.

8.1.20.4 System Status Reporting

Send messages to the applications or interactive user (or to a system operator) regarding the status of operation and any errors that may have occurred.

8.1.20.5 Process Offloading

Offload the management of called batch jobs or reporting through "ad hoc" query tools.

8.1.20.6 Dual Processor Support

If symmetrical hardware is offered, the operating system (OS) will provide parallel processing and manage the division of the program so that it runs on more than one processor at a time.

8.1.21 System Level Software

All software applications supplied shall be of the latest production version in current release unless otherwise specifically requested and authorized by the State. The provision of "BETA" or other "work-in-progress" software applications is not acceptable unless specifically requested and authorized by the State.

The Offeror shall provide an industry standard messaging and file transfer system and "real-time" workstation-to-workstation messaging for all workstations/terminals. This shall allow messages to be sent to/from specific workstations/terminals, groups of workstations/terminals and to printers on the CAD and MDCS. The Offeror will indicate the internal mail system offered and the features and functions available through this system.

8.1.22 System Responsiveness

Dispatching appropriate public safety resources to calls for service received from the public is a time/life critical event. In-progress crimes, medical emergencies and other serious incidents requiring immediate assistance are instances where literally every second counts. Because of this, the computer system, applications software, and the connectivity cannot add appreciable delays in responding to an incident.

The response time requirements for the CAD and MDCS are outlined within this document in other sections.

The CAD system shall also have the capability of partial complaint transmission to a different Call Taker/Dispatcher or Supervisor after only the nature of the complaint and the address has been entered, while allowing the telecommunicator to add additional call details, as they become known.

The system shall accommodate the incident volumes and other applicable sizing parameters specified in Table 3 Dispatch Center Statistics. The initial system hardware and software configuration shall also be expandable to handle the anticipated increase of workload as specified previously. The system, thus expanded, shall also allow for maintaining the critical system performance measures.

System files and tables shall be capable of being updated on-line without adversely affecting system performance. In addition, the backup of system files and information shall be capable of being done on-line without adversely affecting system performance.

8.1.23 System Security

Appropriate safeguards shall be provided to ensure that only authorized terminals/workstations and authorized users are allowed access to the system environment and stored information. At an absolute minimum, this means both workstation/terminal level security in combination with user ID and passwords control access. This combination must be available to control the level of system access granted.

Offerors shall provide specific information regarding the available security functions and features that are integrated or available within the Offered configuration.

The preferred methodology would include various "security profiles" that would be attributed to individual users or groups based on personnel classifications (i.e., Police Officer, Call Taker, Clerk, Dispatcher, Investigator, etc.), allowing access to the various modules, applications, functions, and/or features of the system environment.

Remote diagnostics or "dial-up" connectivity is required in this RFP. The Offeror will discuss what security measures (hardware and software) will be in place to protect this external access to the systems environment.

8.2 Workstation/Terminal Functionality

The CAD workstations shall be capable of performing all CAD functions, accessing all information within the CAD system, ACJIS/NCIC and DPS mainframe application as specified herein.

8.2.1 Security Profiles

The State desires that any workstations within the Offered system configuration have access to any function of the CAD or interfaced systems based upon the user's specific security profile and/or the workstation security profile. It is anticipated that due to the critical nature of the CAD system, remote CAD users will primarily be observing unit and incident status and, on occasion, incident details. However, certain CAD workstations (up to three at any one time) may become full CAD workstations (e.g., the front desk counter) in order to enter incidents and other information into the CAD system. Offerors shall explain how they plan to accomplish this functionality.

8.2.2 Status Monitoring

If dedicated status monitors are offered as a part of the CAD system configuration, these may be monitors attached to, and driven by, the CAD workstations, as long as the responsiveness of the status monitors and/or the CAD workstations does not experience degradation. If the CAD workstation utilizes the Microsoft Windows or Windows NT environment and provides multiple windows, a pending and active incident window, unit status window and ACJIS/NCIC window shall be provided at a minimum. The CAD workstations shall NOT "lock-up" or become disabled or unavailable for users' input or access during any transactions or when making queries to external system databases. For example, if a query is sent to ACJIS or any other external system, the CAD system functionality shall be accessible by the user while awaiting the ACJIS or other external interface system response. Similarly, when the CAD is receiving ANI/ALI information from the E9-1-1 system interface, the CAD system shall suffer no degradation.

8.2.3 Architecture

The CAD workstations shall be microcomputer-based and connected to the CAD server(s) via a switched 10/100 base-T local area network (LAN).

8.2.4 User Interface

Microcomputer based with a standard graphical user interface (GUI).

8.2.5 Processor

Minimum of 1 GHZ Pentium processor .

8.2.6 Memory

256 MB SDRAM memory/512 KB secondary cache.

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8.2.7 Disk Drive

40 Gigabytes of disk storage.

8.2.8 Network Adapter

Integrated network 10/100 Ethernet adapter.

8.2.9 Peripheral

DVD/CD ROM

8.2.10 Display

17-inch color monitor, and graphics controller displaying at least 1024 by 768 resolution at 24-bit color. Dual 17-inch monitors are preferred.

8.2.11 Keyboard

12-function, standard QWERTY keyboard with separate cursor and numeric keypads.

8.2.12 Point Device

Two/three button pointing device.

8.2.13 Power Protection

Surge protection

8.2.14 Operating System

Current version of the Microsoft Windows Professional Operating System

8.2.15 Standard Applications

a) Microsoft Office XP standard
b) IBM Host Access Client Package (mainframe access)
c) Lotus Notes
d) Norton Anti-Virus

8.2.16 Regulatory

Meet Part 15, Subpart J of the FCC Rules and Regulations for Class A computing equipment.

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8.2.17 Standard Functions

a) Provide point-and-click functionality.
b) Provide drag-and-drop functionality.
c) Provide dialog boxes.
d) Provide drop down menus.

8.2.18 Quantity

The number of CAD workstations by type as specified in Table 3 Dispatch Center Statistics, shall be provided.

8.2.19 Locations

There shall be seventeen (17) CAD workstations located at the Phoenix Dispatch Center. Those positions are:

a) Five (5) Call Taker workstations.
b) Ten (10) Dispatch/Supervisor workstations.
c) Two (2) Administrative workstations.

There shall be ten (10) CAD workstations located at the Tucson Dispatch Center. Those positions are:

a) Three (3) Call Taker workstations.
b) Six (6) Dispatch/Supervisor workstations.
c) One (1) Administrative workstation.

There shall be nine (9) CAD workstations located at the Flagstaff Dispatch Center1. Those positions are:

a) Two (2) Call Taker workstations.
b) Six (6) Dispatch/Supervisor workstations.
c) One (1) Administrative workstation.

Additionally, there may be several CAD Call Taker/Dispatcher workstations located in Dispatch center facilities. These workstations will be either temporarily or permanently dedicated to CAD and connected to the CAD system via the State's LAN/WAN.

1 Flagstaff workstations shall be a separately priced optional item.

8.3 General Server and Workstation Requirements

8.3.1 Printing Requirements

Two laser printers shall be supplied by the Offeror for each of the three Dispatch Centers. All Flagstaff equipment shall be a separately priced, optional item. Each printer shall be located in the appropriate Communications Center location. Offerors will indicate the manner in which the printers are connected to the system. If the Offered printers are to be connected to a network environment, the Offeror will either provide a printer that is directly connectable or will provide the required print server devices to facilitate the connection. It is preferred that the aforementioned printers be connected to the network and not attached or "slaved" through the CAD workstation.

8.3.2 Software Upgrades

The Offeror shall provide necessary equipment (CD drives are preferred) to allow operating system and/or application software upgrades to be easily loaded onto the system. Offerors shall describe how they plan to provide software upgrades.

8.3.3 System Backup and Restoration Capability

The Offeror shall provide the necessary equipment (hardware and software) to allow for required backups and/or restoration of system applications and users' information. The Offeror will fully explain how the backups/restoration are accomplished and what effects these operations have on the operating CAD environment. Systems that require the CAD system to be removed from service or placed into a degraded mode of operation for routine backups will not be acceptable. Furthermore, Offerors will indicate the amount of automation available for the routine backups, the amount of time that routine or daily backups will require, and the amount of user intervention that will be required to accomplish this daily system maintenance activity.

It is required that the system automatically prepare a listing of all information manually deleted from the system, and of all information automatically moved to archives or purged.

8.3.4 Information Integrity

The integrity of the information within the system shall be maintained at all times. To meet the reliability requirements where dual or multiple disk drives are provided, the system shall dual-record all critical information; in addition, internal transaction-in-process queues shall be maintained. The system shall ensure that an aborted transaction, which may be due to program abort, hardware failure, or bad inputs, is removed from the database/files and the database/file is left in a consistent state. The system shall ensure database/file consistency in the event of a disk drive failure; and in the case of mirrored disk drives, both disks in the pair fail simultaneously. This may

be accomplished by audit trail or via backup DVDs, backup journals, or other similar approaches.

Offerors are expected to fully explain how their Offered systems accomplish continued integrity of the stored information.

8.3.5 Cabling

The Offeror will be responsible for providing and installing all cabling interconnecting integrated or interfaced equipment located in the Communications Center and equipment room. The cabling and related equipment shall be category 5 and/or certified as category 5 compliant. Offerors are required to use Plenum rated cable within any areas that it would be required by applicable fire codes.

Offerors are responsible for installing all cabling consistent with industry recognized practices. All network equipment, power supplies, etc., shall be installed in protected areas or closets and shall be firmly held in place by applicable racks or fastening and/or supports which are adequate to support their loads with an ample safety factor.

Care shall be exercised in cabling to avoid damage to existing wiring and equipment. All cabling and connectors shall be installed in strict adherence to standard communication installation practices and all federal, state, and local applicable codes.

All cables, regardless of length, shall be marked and/or numbered at both ends. Marking codes shall correspond to recognized standards and specifications. All cabling shall be neatly installed and adequately supported.

No splices will be allowed in system wiring or cables other than at approved, designated locations.

8.4 CAD Application Software Functions

It is the intention of the Department of Public Safety to purchase primarily "off-the-shelf" or basic CAD software functionality, requiring the minimum amount of modifications necessary in order to support necessary functions and interfaces. However, to ensure that the Offeror's software meets a minimum set of requirements, this section specifies the minimum functions that must be supported by the CAD software.

The Offeror must tailor the CAD system to fit the requirements of the State. This will be accomplished through either minor customization of the CAD system software or, primarily, through adjustments in file layout, configuration tables, screen presentation formats, and field sizes. The costs associated with any required customizations shall be included in the proposal. The State will not reimburse the Offeror for any system tailoring/customization efforts beyond the amounts specified in the Offeror's response to this RFP and the resulting contract.

With the exception of some supervisory functions, it is expected that all functions can be made available to all workstations/terminals, provided the operator has been assigned the proper security authorization. However, for convenience, the functions shown in the following subsections are listed under the primary user of the function.

8.4.1 General Functional Requirements

The Offered software shall be capable of supporting incident intake, resource recommendations, dispatching, unit status, and management reporting primarily for Police. However, Fire, and EMS functions should also be supported in case the State contracts with local agencies for the dispatch of Fire and EMS resources. The following functions and features shall be provided at a minimum. Offerors shall highlight and describe any functions and features provided by their basic packages that are not described below.

8.4.1.1 Position Functionality

The software should support dedicated as well as combined Call Taker and Dispatcher arrangements. The initial configuration dictates that most of the CAD workstation will be configured to operate as combined Call Taker and Dispatcher positions.

8.4.1.2 Multi Agency Support

The software must support multiple agencies and geographic areas (e.g., the ability to dispatch only for Phoenix or for both Phoenix and Tucson). Fire and EMS functionality is not required at this time. However, the Offered CAD system must be able to provide Fire and EMS functionality as a future option.

8.4.1.3 Incident Routing

Any incidents, which require resources from multiple agencies, regardless of entry point, must be routed to the appropriate dispatch position(s) in each of the responsible agencies, depending on the incident location and type of incident. Each agency must be able to select which functions their telecommunicators are allowed to access.

8.4.1.4 Multi Window Support

All CAD workstations/terminals shall have multiple windows available. Standard Windows-type functionality is desired for all CAD applications (e.g., dialog boxes, point-and-click, drag-and-drop). Switching from one window to another shall not affect any information entered in any displayed window.

8.4.1.5 Table Driven

The software design should make extensive use of table driven parameters, allowing easy modification by the system administrator without the requirement for programmer support. These modifications should be able to be made while the system is active without any impact upon CAD operations.

8.4.1.6 Utilities

A library of utility programs shall be supplied to maintain the CAD system's resources, configuration, and information files. These programs shall be accessed through menus or similar operation and shall be security controlled. Integrated "help" functionality for these configuration routines is highly desired.

8.4.1.7 Display Printing

Any information displayed on a CAD workstation/terminal shall be able to be printed on a designated shared printer, a locally attached printer, or "routed" (sent) to other workstations or printers at any time.

8.4.1.8 Backups

Backup of the CAD files and user data/information shall be able to be accomplished without taking CAD out of service and with minimal impact upon CAD operations. Offerors are to explain the backup methodology used and the degree of automation as well as the anticipated duration of a routine backup.

8.4.1.9 Function Keys

The CAD applications shall make use of programmable function keys for all frequent operations, in addition to the windows standard functionality (dialog boxes, etc.), to reduce the number of required keystrokes. The Offeror shall explain the operation of all function keys provided and the degree to which the applications support point-and-click device functionality.

8.4.1.10 Command Line Support

The CAD application must provide a command line mode. Command line mode is typically composed of a data entry field in which a command verb (e.g., traffic stop) is followed by appropriate parameters (e.g., street location, unit, etc.). Although standard windows options such as drag-and-drop, pop-up menus, drop-down menus, etc., and function keys provide access to system functions, advanced users must be provided with a command line mode in which all or most system functions (e.g., initiate a new incident, update unit statuses, initiate a traffic stop, query ACJIS, etc.) are accessible. Offerors shall list the set of system functions accessible via the command line mode and explain the operation of the Offered CAD system's command line mode.

8.4.1.11 Function Selection

Menus or drop down dialog boxes may be provided to select the various functions that are available in the CAD applications program. Comprehensive security shall control what functions are available to each user. Only those functions that are allowed by security shall be displayed except when using Windows drop down dialog boxes, where the features not available shall be grayed out. The Offeror shall explain how the menus work in relation to provided security features.

8.4.1.12 Email/ Messaging

E-mail/messaging functionality as previously described shall be provided. All text messaging between all MDCS users and the dispatch facility shall be logged and retained consistent with agency audit policies. These text message log files shall be accessible to authorized agency personnel for law enforcement audit purposes.

8.4.1.13 Training Sub-system

The CAD system must support a training component that will allow new personnel to be trained on the system without impacting the production or "live" environment, or stored information. Offerors shall explain how this functionality is provided and if their Offered system incorporates the ability to create "training scripts" for CAD simulations.

8.4.1.14 Locally Archived Records

The CAD system shall allow the retrieval of any incident and/or data element on-line for at least a 180-day period. When an archived DVD or other media is loaded onto the system, the applications will facilitate the retrieval of any previous incident and/or data element contained on the backup medium.

8.4.1.15 Time Stamp Override

The CAD system shall allow the delayed entry of incidents (e.g., for entering incidents that occurred while the CAD system was not operational), with a capability of entering actual time, not current computer time, into all time fields. Any entry of information subsequent to the entry of the original incident shall include the date, time, and ID of the person entering the information.

8.4.1.16 ACJIS/NCIC Integration

Workstations/terminals located in the Communications Centers shall have the capability of accessing ACJIS/NCIC via the CAD computer through a window and performing all authorized ACJIS/NCIC functions. Additionally, the CAD system shall automatically send a query to ACJIS/NCIC and any interfaced applications (see required interfaces below) for registration and wants and warrants checks when a license plate and/or person's name is entered. Access to ACJIS/NCIC functionality must be controlled by sufficient security, which must include a unique user ID and password for each authorized person.

8.4.1.17 Inquiry Logging

The CAD system must provide for automated logging and retrieval of all criminal justice inquiries consistent with State and NCIC regulations and policies. Criminal justice inquiry access must be restricted by appropriate security. In addition, provision for a minimum of a 90-day log must be provided.

8.4.1.18 Dial-in Access

A dial-up facility shall allow personnel with the proper security level to access the CAD system and obtain current and historical information relating to incidents and unit status. The system shall support three concurrent dial-up sessions.

8.4.1.19 Sharing CAD Information with Other CAD Systems (Future Standards Compliance)

The CAD system must be compliant with APCO 36 and IEEE P1512 standards once they are adopted. DPS often coordinates and is involved in incidents that require multiple agency responses. Often these agencies have their own CAD systems and it is desirable to be able to share incident information electronically. These two standards (APCO 36 and IEEE P1512) aim at allowing disparate CAD systems to electronically share incident information. The State recognizes that the standards are still in the formulation stages. However, a statement indicating that the Offeror will comply with these standards once they are adopted and any costs associated with compliance must be included in the responses to this RFP.

8.4.1.20 Log on/Log Off Control

Each workstation operator shall log on before being recognized by the system. The logon process should incorporate a "single entry" to enable logons to multiple authorized systems. The logon identification of the operator shall be validated by the system(s) before that operator can perform system functions. The logon identification will become part of the CAD incident record for all incidents created or dispatched by that operator.

The CAD shall have the ability to quickly log off an operator and log on a new operator, without the need to exit from CAD or re-start the program. This will facilitate shift change and relief for breaks. The time and date, along with the ID of the operator logging off and the ID of the operator logging on, shall be recorded in a system history log file.

8.4.2 Incident Receipt

8.4.2.1 Incident Creation

Upon receipt of a call for service, the application software shall allow for the capture and maintenance of the following incident information, at a minimum:

a) Incident type (table-defined). The software must provide an on-line help function for valid incident types. If the operator enters an incorrect or a partial incident type, the system shall display a list of valid incident types. The user shall be able to select the correct incident type from that list. The selected incident type must then be filled in by the system in the call for service screen. The system shall also automatically display any related procedures or instructions related to this incident type for the proper agency based on the incident type.

b) Incident location (geo-processed) providing cross street, Patrol District, and other AZHP administrative area information. All incident

locations, whether obtained from the E9-1-1 controller or entered directly by the operator from administrative line (seven-digit) calls must be validated against the system's geo-file. The State requires that both the incident's and the caller's locations be displayed as separate icons on the associated tactical map display.

c) Incident priority (table-defined based on entered incident type). The software shall allow the Call Taker to override the table-defined priority value and enter a different priority level.

d) Indication if the event is "in-progress" or has "just occurred." The default shall be set by the incident type, but modifiable by the Dispatcher or Call Taker.

e) Complainant name.

f) Complainant address – a majority of the incidents that will be entered into the system are located along interstate freeways, state and local highways. Address based information is usually not available. Therefore, the entry of location information, such as mile markers, exit numbers, X, Y coordinates provided by phase II compliant cellular calls must be optimized in the Offered CAD system. Offerors must describe in detail how their Offered system will facilitate the entry of this type of location/address information.

g) Complainant telephone number.

h) Call narrative/comments.

i) Suspect(s) description(s).

j) Vehicle(s) description(s).

The software shall allow the Call Taker to capture the caller's information in any order. The Call Taker shall be able to move around the input screen by tabbing, by point-and-click device, or by a next-line key.

The entry of locations shall be non-restrictive and allow entry of:

a) Mile posts/markers.

b) X, Y Coordinates provided by Phase II compliant mobile telephones

c) On and off ramp exit/entrance numbers, direction of travel and distance to/from (e.g., West bound I-10, two miles from exit #221).

d) Under/Over pass names, direction of travel and proximity (e.g., West Bound I-8, one mile north of Broad Street overpass).

e) Street addresses.

f) Commonplace names.

g) Intersections.

h) Landmarks.

8.4.3 E9-1-1 Interface

The three dispatch centers are secondary PSAPs set up to receive E9-1-1 calls transferred from primary PSAPs. MAARS E-9-1-1 controllers are located at each

center and are able to receive and display transferred E9-1-1 calls. The E-9-1-1 controllers are also interfaced to Vesta Phone systems located at each center. The E9-1-1 controllers are capable of providing ANI/ALI information to a CAD system (i.e., the controllers support a CAD port).

The Offered CAD system shall be capable of interfacing with the existing MAARS E-9-1-1 controllers and the Vesta Phone systems by automatically filling in the CAD call screen with the corresponding ANI/ALI information associated with an E9-1-1 call. The CAD call screen will automatically be populated with at least the following information:

a) Location of calling telephone.
b) The telephone number.
c) The subscriber's name.
d) Comments from the ALI screen.
e) Phase I and II information for E9-1-1 calls originating on mobile telephones

If the location of the calling telephone is the emergency location, a single keystroke shall accept the location and validate it within the CAD geo-file.

If the telephone's location is not the incident's location or the location is not correct, the workstation/terminal user shall be able to input the correct incident location.

The E-9-1-1 information shall be retained in the call for service history. The CAD system will retain for future analysis the calling party information and all E-9-1-1 ALI/ANI information received, regardless of whether an incident was created, as a single incident may produce multiple E-9-1-1 calls.

8.4.3.1 Location Validation/Geo-File Lookups

Upon entry of the incident location, the CAD application software shall provide a look-up to the geographic database (geo-file). This process shall facilitate validation of the incident's location. The system must assist the user in validating partial, incomplete, or inaccurate locations. CAD shall utilize a "Soundex," "Metaphone," and/or other appropriate lookup aids for street names, intersections, commonplace names, landmarks, or street/highway route numbers. A list of possibilities should be displayed when a partial spelling or misspelling of a street name is entered.

The location/geo-file must support multiple "aliases" for street names, intersections, commonplace names, landmarks, mile markers, exit, and on ramps, over and underpasses, or street/highway route numbers.

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If CAD is unable to provide an exact location match, a list of potential matches, based on available lookup aids, shall be displayed to the user. The Call Taker shall be able to select the correct location from the displayed list, scroll forward or backward for other potential locations, or restart the location lookup with a new location.

Offerors shall describe the tools available in the system for assisting users to validate addresses and other locations. Soundex, Metaphone, use of the tactical map display, and other techniques are especially desirable.

Once the address is validated, the system must identify the appropriate Highway Patrol District, sector, reporting area, agency of jurisdiction, and any other geographic boundaries containing the address. The two nearest cross-streets shall be displayed. The incident location shall be displayed in the center of the associated tactical map display zoomed to a readable level automatically after the address is validated.

All geographically sensitive hazards, dispatch policies, and other system functions shall stem from validated locations.

The operator shall be able to complete the location look-up immediately upon entry, or at any time during the incident entry process.

The CAD application will provide a feature to perform location validations/geo-file lookups without the need to create an incident.

Commonplace Names

The CAD application shall allow the user to enter a location as a commonplace, or business name, e.g., Palos Verde Apartment Complex. The CAD shall automatically connect the commonplace name with an exact address. If more than one location has the same commonplace name (i.e., McDonalds), the CAD shall display a list of all locations with the same name. The user shall be able to select the correct location from that list by using the keyboard or a point-and-click device.

Mile Markers & Other Freeway/Highway Location information

Most of the incidents reported to DPS are located along highways, freeways and entrance to and from them. The Offered CAD system must provide an optimized method for locating these types of incidents. Offerors shall describe the methods employed by their Offered systems for entering these types of locations.

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Phase I and Phase II location information from E9-1-1 calls originating on Mobile Telephones

The vast majority of the incidents reported by the public to the three dispatch centers originate on mobile telephones. The State desires a system that is compatible with Phase I and Phase II information (see below for a technical discussion of Phase I and Phase II requirements). The Offered CAD system must be able to pinpoint/locate mobile telephone calls. Offerors are to describe how their Offered system supports the ANI/ALI information that will be provided by mobile telephone systems compatible with Phase I and Phase II.

Alias Street Names

The Offered CAD system shall include an alias-street name file to accommodate multiple street names or abbreviations for the same street (e.g., Main Street and Martin Luther Drive are the same streets). If the user enters an alias street name, the CAD shall automatically translate the alias name to the official street name. If several variations of the same name exist, the CAD shall display a list of all possible street name variations. The user shall be able to select the correct location from that list by using the keyboard or a point-and-click device.

Intersections

The Offered CAD system shall utilize an intersection file. This file must allow for multiple intersections of the same two streets (e.g., the intersection of I-10 and Broad Street may have four intersections, one for each on/off ramp; when two streets are coincident for a stretch, there will be at least two intersections - one each where the two streets come together, etc.). The Call Taker shall be able to enter partial street names to speed up the location entry process.

8.4.3.2 Advisory Information

The software shall also perform necessary look-ups to determine, at a minimum, if any of the following conditions exist at the entered incident location. The system shall provide the ability to have the following information displayed:

a) Location information. This information will be used for displaying hazards or special instructions relating to a location. An on-line program shall maintain these notes. Notes shall be able to be associated with various geographic locations: grids, street segments, intersections, or specific addresses.
b) Prior incident history (at least the last ten incidents at the location).
c) Duplicate incident detection. The software must detect and notify the Call Taker/Dispatcher of the potential of a duplicate incident. The

detection shall take into consideration location proximity and time. The time parameters and proximity used by the software for this detection shall be user definable. A geographic (spatial) search is desired.

d) Emergency contacts for the location (business or residential).

e) Standard Operating Procedures (SOP's). CAD shall maintain SOP information for each department/agency using the system. The appropriate agency's SOP will be displayed based on the incident type and location. The SOP's will be used to advise dispatch or patrol personnel on how that specific incident type is to be handled. The detailed information on the SOP shall be displayed in a separate area or window on the screen, allowing the incident to be displayed at the same time as the SOP.

f) Hazardous Locations. The CAD application will provide for location validation against a supplemental file containing locations that have been deemed hazardous to public safety personnel. This subsystem will allow the entry of dangerous persons, hazardous materials, or other conditions that may be prevalent at the locations. The system will also allow for a user-defined proximity search around the incident location. The Offeror shall discuss their Offered system's ability to provide both hazardous locations support and proximity searches for locations.

CAD shall indicate the existence of advisory information to the user, and display this information upon demand. This information must be displayed in a pop-up window without losing the incident information from the screen. At any time during the life of an active incident, the users shall be able to quickly display the advisory information for that particular incident.

It is desirable that the Offered CAD system, store a record of which users reviewed the advisory information associated with an incident or location and the date and time that they reviewed it. This information should be stored as part of the Offered CAD system's transaction log.

8.4.3.3 Urgent Incidents

The CAD applications software shall allow the Call Taker to pass an urgent but incomplete call for service (containing only basic incident type and validated incident location information) on for immediate dispatch while the remainder of the incident intake information is being solicited. As the Call Taker is obtaining further information through caller interrogation, the updated information will automatically be sent to the Dispatcher(s) who is/are handling the incident. All information added to the incident should contain the time, date, and operator ID.

8.4.3.4 Interruption of Incident Intake for More Urgent Incidents

The Offered application software shall provide the ability to save multiple, partially completed incidents or calls for service. A summary of all partially completed incidents will be displayed on the Dispatcher/Call Taker's workstation/terminal. The original Call Taker or a different Call Taker shall be able to retrieve these partially completed incidents and finish processing them in any order.

8.4.3.5 Incident Routing

CAD shall automatically route a new incident to the appropriate Dispatcher(s) based on the incident type and the jurisdiction(s) responsible for the incident location. The system must be able to route the incident to multiple workstations/terminals (for example, injury accidents routed to both Emergency Medical Services Agency (EMSA) and highway patrol Dispatchers). The CAD system will also allow routing to multiple workstations/terminals within an agency (for example, a major incident is routed to both the primary Dispatcher responsible for the patrol district and to the dispatch Supervisor).

The Call Taker shall be able to override the normal call routing by entering the desired Dispatcher position ID. The Call Taker's screen shall provide a display of Dispatchers who are logged onto the CAD system and their areas of responsibility to facilitate the expedient manual routing of incidents.

The system shall support "default supervisory position routing" of particular user-defined incident types to a designated supervisory position.

8.4.3.6 Incident Priority

CAD shall automatically determine the priority of the incident based on incident type and whether it is in progress. This priority shall be derived from a table established using the incident priority system for each dispatch center. CAD shall allow the Call Taker to override any priority at any time.

All priority overrides shall be recorded and allow a report generated on a daily basis at a time selected by the State.

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8.4.3.7 Duplicate Event Detection

The CAD system shall automatically check for duplicate incidents based upon a radius search distance in number of feet (or similar method) from an incident location. After the location is verified, the CAD system shall check all active and pending incidents in the response area. Because different callers may report an occurrence as a different type of incident, all incidents within the search area shall be reported as possible duplicates.

If any potential duplicates are found, the system shall display sufficient information about each for the Call Taker to make a proper determination. The Call Taker shall then be able to easily cancel the event if it is a duplicate, proceed with the incident processing, or append the additional information to the "duplicated" incident record. The CAD applications will maintain canceled "duplicate" incidents within historical system files.

A procedure will be available in the CAD system to merge incident information from duplicate incidents to the master incident record. A record of the canceled duplicate incident shall be maintained in the master incident record.

8.4.3.8 Adding Information

The CAD shall allow a Call Taker or Dispatcher to add information to an active incident at any time. All information entered will be transferred "almost instantaneously" to all Call Takers/Dispatchers working the call and will contain the ID number of the person entering the information, along with the date and time of entry. All information shall be retained in the incident history record.

Additional information may be added to completed incidents at any time through other CAD application functions. Information contained in completed incidents may not be modified by the addition of new information subsequent to the closure of the incident. Offerors will explain in detail the method in which their respective systems handle this requirement. Furthermore, Offerors will explain the impact that additional information may have on the transfer of this "new" information to a future Records Management System.

8.4.3.9 Transfer to Other Agency

The CAD shall provide the ability to transfer an active incident to another agency without physically transferring the incident and closing the incident within CAD. The closed incident will contain all information captured during the processing of the incident, as well as a notation indicating the date, time, and ID of the agency to which the incident was transferred.

8.4.3.10 Non-Dispatched "Advised" Incidents

The Offered CAD system shall provide the ability to record information from citizens about particular situations or incidents that do not require the dispatching of any public safety resources. These incidents will be recorded and retrievable from the system/incident history files for later access and information analysis.

8.4.4 Dispatch Functions

8.4.4.1 Selecting Pending Incidents

The Offered CAD application shall contain a window or screen that contains/displays pending incidents. CAD must be able to sort the displayed pending incidents in order of priority and by elapsed time (time since entry).

The Dispatcher shall be able to:

a) Select the highest priority incident from the pending incident display with a single keystroke and/or by selecting the incident using a point-and-click device.
b) Select incidents from the pending queue in any order.
c) Place an incident back in the pending queue after reviewing it.
d) Select another pending incident from the screen.
e) If more than one pending incident is open at the same time, each incident will be located in a separate window and the Dispatcher will be able to toggle back and forth from each of the open incidents. Offerors shall describe the maximum number of pending/active incidents that can be opened at any one time and how the system accomplishes this process.

8.4.4.2 Dispatch Screen

The CAD software shall provide the following basic functions/information when an incident for service is retrieved for dispatch:

a) All call for service information obtained during incident intake.
b) Geo-file information, to include: the closest cross streets, jurisdiction, and containing patrol district, which shall automatically be computed by the CAD system for verified locations. All other administrative areas established shall be automatically computed for verified locations and displayed as part of the incident record. This information should be easily available for review by Dispatchers and any Supervisors working the call.
c) Location advisory information. This information will be used for displaying hazards, hazardous materials, or special instructions relating

to a location. Notes shall be able to be associated with various geographic locations (grids, street segments, intersections, or specific addresses). Information regarding hazardous locations in proximity to the incident location shall be flagged.

d) Prior call for service history (at least the last ten incidents at the location).

e) Duplicate event detection. The applications software must detect and notify the Dispatcher of the potential of a duplicate incident as previously described.

f) Emergency location contacts.

g) Incident type advisory or procedural information. Each CAD incident type may have multiple advisory or procedures displayed. These instructions may be used to advise dispatch and/or patrol personnel on how that specific incident type is to be handled. The detailed information shall be displayed in a separate area or window on the screen, allowing the incident to be displayed at the same time as the advisory.

h) Upon entry of a dispatch code, the literal translation shall be displayed.

CAD shall maintain a file of the emergency contacts for a location, containing, at a minimum:

a) Name of the contact.
b) Relationship of the contact to the location.
c) Home and work phone numbers.
d) Free form comments.

Whenever an incident location has emergency contacts, an indicator will be displayed to the user advising them of the existence of the emergency contact information. The detailed information on the emergency contact shall be displayed in a separate area or window on the screen, allowing the incident to be displayed at the same time as the contact information.

8.4.4.3 Unit Recommendation

CAD shall automatically provide the Dispatcher with a suggested unit recommendation. This recommendation must be composed of a specific unit identifier and shall be derived by taking into account the following basic elements:

a) Unit staffing and unit types.
b) Unit types and unit equipment capability.
c) Incident type to determine the type and number of units to recommend.
d) Incident geographic location to determine the patrol district to determine the order in which to recommend specific units to respond.

e) The CAD system will allow the dispatch of different types of resources for the same incident type when the incidents are located in different geographic sub-areas (i.e., geographically sensitive dispatch policies).

f) Real-time unit status to determine unit availability. All unit recommendations shall correspond to the current, real-time status of all resources. The software shall never recommend a unit that is on another assignment or otherwise unavailable for dispatch. The software application shall facilitate the definition and recommendation of second, third, etc., level units in the event a primary recommended response unit(s) is in an unavailable status.

g) Flexible patrol district plans and the currently active patrol district plan. The applications software will support multiple patrol district plans. The Offeror is to indicate how many different plans may be entered by the user agency.

h) The CAD system will provide for temporary change of Patrol district assignments. The dispatch recommendation will be based on the actual unit location rather than its normal patrol district.

i) The CAD applications will support "tactical locations" that will increase the normal response based upon the location of the incident. These "tactical locations" and the resulting response recommendations will be user defined.

j) The system will provide for a "degraded" mode(s) of dispatch activity. In situations of large thunderstorms, peak brush fire season, and other major events, the number and type of recommended units will be reduced based on the system being placed in degraded mode. The reduction in resource recommendations will be table driven. One or more degraded modes are desired. Offerors shall describe their system's method for handling this requirement. (Separately priced option.)

k) For vehicles equipped with Automatic Vehicle Location (AVL) capabilities, the system will be able to dispatch the nearest appropriate unit based on its AVL location.

8.4.4.4 Dispatching Units

The Dispatcher shall have the capability to accept the system-provided unit recommendations with a single keystroke or action of a point and click device, or override the recommended units and replace them with one or more other units.

A. The Dispatcher shall have the capability to select a unit that is on a lower priority incident. A single keystroke shall remove the unit from the previous incident (preempt) and assign it to the new incident.

If the preempted unit is the last unit assigned to an incident, the incident shall be automatically placed in the pending incident queue and held (stacked) for that unit. When the unit clears the incident to which it was assigned, the unit will be recommended to the incident from which it was preempted. If a different unit is assigned to the incident in the pending queue, the incident will no longer be stacked (held) for that unit and the system will not automatically recommend it when the unit becomes available again for dispatch. All times associated with assignment and re-assignment shall be kept in the incident history file.

B. The Dispatcher shall have the ability to change the primary unit at the time of dispatch or at any time during the handling of the incident. The primary unit is the unit who is responsible for completing any required departmental reports.

C. The CAD shall provide the ability to stack, or assign low priority incidents to a busy unit. These incidents shall be time stamped, and displayed in the pending incident display with an indication that the incident has been stacked to a unit. When the unit clears from one incident, the applications software will provide an indication that the unit is now available for a "stacked" or preempted incident. The CAD shall time stamp when the unit is en route to the new incident.

D. Upon acceptance of a unit dispatch recommendation or input of a Dispatcher's own unit recommendation, the applications software shall automatically and dynamically update the status of all affected units throughout the CAD system. All CAD workstations/terminals must be updated with the new status information automatically and instantaneously.

E. Upon acceptance of a unit dispatch recommendation or call assignments, units equipped with Mobile Data Computers through the MDCS functionality will automatically be notified of their assignment, status update, call information, other units assigned to the call, and location and hazard information.

F. The system shall provide the ability to automatically transmit "pre-defined" messages via the alphanumeric paging system based on the type of incident. Additionally, the CAD will have the ability to transmit specific information from the incident to specified alphanumeric pagers.

G. The system shall allow the use of drag-and-drop functionality for dispatching units, where the unit icon can be dragged to the incident icon and "dropped" onto it. This function will cause the unit to be placed in a "dispatched" status to the incident onto which the icon was dropped. Similar functionality shall exist for other status conditions.

8.4.4.5 Incident and Unit Status Maintenance

The applications software shall dynamically and interactively track the status of all resources that are defined within the CAD system. A unit icon shall appear on the tactical map display showing the last known location of the unit. The unit icon shall be repositioned to the new location each time the unit's location is changed.

For AVL equipped vehicles, the unit's location will be automatically updated via the AVL system. The color of the icon shall correspond with the unit's status. For MDC equipped vehicles, the system will allow them to digitally update their status by using their onboard Mobile Data Computers. The system will track those status updates as if they were entered by system operators.

The software shall provide an indication as to whether a Patrol unit is a single or multi-person unit. The unit icon displayed on the map shall indicate this also.

The applications software shall track the following minimum unit status conditions for each unit assigned to an incident:

Unit Status
On Duty
Dispatched
En route
On scene
Transporting to Facility (with starting odometer reading and destination)
Arrive transporting location (with ending odometer reading and destination)
Available (Clear)
Available at scene
Available on Radio
Out of Service (with an explanation code and location)

The following Incident statuses shall be available at a minimum in the Offered system:

Incident Status
Call/Incident Received
Call/Incident routed
First Unit Dispatched
First Unit En route
First Unit On scene
Ambulance Requested
Additional units requested
Last Unit Cleared the Scene
Last Unit Cleared the Incident
Incident Closed

Recorded times (e.g., dispatched, arrived, etc.) shall be maintained in military (24-hour clock) format. The applications software shall capture hour, minutes, and seconds (HH:MM:SS). All unit status changes shall be automatically time-stamped and become part of the incident or call for service history. The clock time and date used by CAD must be able to be reset while CAD is operational, and without the need to have users log off or to re-boot the system. The Offeror shall discuss how their respective system handles semi-annual time changes and the effects that these time changes have upon open incident times and later statistical analysis.

Unit Status Timers

The CAD applications software shall provide unit status timers that will advise the Dispatcher if a unit has exceeded the preset amount of time in a status condition. The time interval for each status timer shall be defined and set by the system administrator. The time of the original assignment shall be maintained as part of the incident record.

The applications software shall provide an initial check-back after a preset time interval passes between when a unit first arrives "on-scene" to when the software shall first prompt the Dispatcher to check on the unit's condition. This time interval shall be defined based on incident type and established by the system administrator.

The application shall provide secondary check-back times which shall be the defined time periods, after the initial check-back, that the software will continue to prompt the Dispatcher to check on a unit's condition.

When a defined check-back period has expired, the system shall visually and aurally alert the Dispatcher assigned to the unit to make contact with the unit.

Once contact is made with a unit whose check-back timer has expired, and the unit advises that its status is fine, the Dispatcher must be provided with an appropriate means to cancel the check-back alert and reset the unit's check-back timer. This process shall continue, utilizing the table-defined check-back time interval, until a unit clears from the incident.

Updating Unit Status

Dispatchers shall be capable of updating unit status through keyboard input of appropriate unit identifiers and a single function key, by a pointing device or via command line entry.

The applications software shall allow Dispatchers to update a unit's status while performing any call taking or dispatching function within the CAD system by providing easy accessibility to an interactive command line at all times. This command line shall allow multiple units to have the same status update simultaneously.

Updating unit statuses must be accomplished without losing the incident information displayed on the screen. If the cursor is repositioned to perform the command, it must be automatically returned to the correct screen and cursor position where the user left off, without losing any information.

The software shall provide Dispatchers with the capability to clear any number of, or all units, assigned to an incident with a single command.

Mobile Data Computer (MDC) equipped vehicles shall be able to update their own statuses. The system shall track these status updates as if they were entered by system operators, but indicate that they were updated by the unit itself (e.g., track the time and the ID of the person/device completing the status update).

8.4.4.6 Updating Incidents

The applications software shall allow both Call Takers and/or Dispatchers to review an active incident and update the incident with corrections or additions. All corrections or additions must contain the time, date, and operator ID.

When a Call Taker forwards updated information to the appropriate Dispatcher, the Dispatcher shall be visually/aurally alerted by the system to the presence of the update. In addition, there will be a clear indication of which information is new or changed.

It should not be necessary to transfer the entire incident to accomplish the transfer of the updated information. The software must allow units to be added as assisting units to an incident after it has been dispatched.

If another agency response is required, such as adding an ambulance to an incident, the CAD shall automatically copy the active incident and route the new incident to the appropriate Dispatcher. The Offeror shall discuss their system's ability to add additional public safety agency resources to an active incident.

The Dispatcher must be able to escalate the priority of an event. The CAD will make additional unit recommendations based on the new priority level. Dispatchers must be able to "preview" the next priority level assignments for an active incident. Additionally, the Offered system must only recommend the "balance of the required units" for an incident if units have already been assigned and dispatched to the incident.

Units equipped with Mobile Data Computers (MDC) shall be able to update the incident record by adding comments, changing its location, etc.

If incident information is updated in the CAD system after a department report number was obtained for the incident from the mainframe DART interface, the CAD system must retransfer updated incident data to the DART mainframe system when the incident is closed.

8.4.4.7 Releasing and Reassigning Units

The software shall allow units to be reassigned from one incident to another or to be easily "exchanged" from one active incident to another. The previous incident shall be returned to the pending queue if the reassigned unit is the last or only unit assigned to the incident. Offerors shall discuss how these functions are accomplished by their systems.

8.4.4.8 Incident Completion

CAD shall allow users to clear either single units or all units on an incident with a single command, function key, or point-and-click device action. If the last unit on an incident is cleared, CAD shall require a disposition code if the user agency requires a disposition code for the incident type. The CAD system must provide an interface to the DART mainframe to obtain the department report number. If a departmental report number is assigned to an incident, the CAD system will require a disposition code if the user agency requires a disposition code with a report number.

The software shall provide for the capture of a user-maintainable incident disposition code, an indicator that a report is or is not required, and incident completion comments.

Upon incident completion, the CAD system shall automatically transfer the CAD incident and unit status information to the State's DART system (see required interfaces below) and other appropriate records system. A function should be provided that will allow for the transfer of active incidents to the State's future RMS. This is necessary in order to create the base records so that department report numbers and reports can be tracked. The State may purchase a NIBRS compliant RMS in the future and the Offered system must be compatible with this future system. Offeror shall discuss how their Offered systems will transfer CAD incident information to the current DART mainframe system and a future NIBRS-based RMS.

If the last unit clearing an incident is Mobile Data Computer (MDC) equipped, it shall be able to indicate the final incident disposition and transmit it digitally to the CAD system. The CAD system shall track and use this disposition as if it was entered by a system operator, including tracking the time, device ID, and Person ID of the person entering the disposition and clearing the call.

8.4.4.9 Status Monitoring

Pending Incidents

In a portion of the split screen or window, the software shall display the incidents waiting to be dispatched (pending) queue. The Dispatcher shall be able to quickly select the desired incident to dispatch.

The pending incident queue display shall present all waiting incidents or calls for service in priority order, and within each priority, elapsed time since incident receipt. Displayed information shall include, at a minimum:

A. Incident priority.
B. Incident type.
C. Location.
D. Appropriate response areas (i.e., Patrol District).
E. Time of incident receipt or elapsed time since incident receipt (user option).
F. Brief comment.

Unit Status

The software shall facilitate the operation of a unit status display monitor. This monitor displays the interactive status of all units controlled by an individual Dispatcher. The status display shall be a separate monitor/Window controlled by the Dispatcher's

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interactive workstation. The status monitor will have the ability to display one or more dispatch groups and one or more agencies at the Dispatcher's discretion.

The unit status display shall present the real-time status of all active units. Status information shall include, at a minimum:

A. Unit identifier.
B. Current status.
C. Assigned incident ID (if assigned to an incident).
D. Assigned incident type.
E. Location of assigned incident or location of the unit if not assigned to an incident (e.g., at Patrol HQ for District 9).
F. Time in status or elapsed time (user option).
G. Brief comment.

The grouping of displayed units shall be user maintainable. This will allow the Department to organize the status display by District, type of unit, geographic coverage area, etc. A single workstation/terminal must be able to display any of the Units/resources monitored by the dispatch center.

CAD must provide an ability to display units that are not normally recommended for dispatch on a separate page or accessible window. When these units are assigned to an incident, their status should be displayed on the primary page or window until they are cleared, at which time they will be displayed on the secondary window or page.

Active Incident Status

A separate portion of the display or a window shall display a summary of all active incidents. The active incident status display shall include, at a minimum:

A. Time incident received or elapsed time (user option).
B. Incident number.
C. Priority.
D. Incident type.
E. Incident type description.
F. Location.
G. Units assigned.
H. Status times associated with each unit.

The Dispatcher shall be able to quickly select any incident from the display for updating. The Dispatcher shall be able to scroll the active incident display, if there are more incidents than can be displayed at one time.

8.4.4.10 Changing Duty Roster and Shift Changes

The CAD shall provide an ability to quickly change the working status of a single unit, including on or off duty, area of coverage, personnel assigned, and whether it can be recommended for dispatch.

The CAD shall also provide the ability to build a shift roster. The capability to build the roster at least one week prior to the shift must exist for all AZHP and other units/resource monitored by the CAD systems.

The shift roster should be maintained in the system for later access and analysis. Historical Roster information should be available for a minimum of 13 months and available for archive to other media.

There is currently a duty roster on the mainframe maintained by the HPBS system by highway patrol district personnel and OPCOMM. DPS envisions that the transfer of information between the CAD system's roster and the mainframe roster will be a manual process performed by the Dispatchers by opening a mainframe emulation window on a CAD terminal and then manually entering the necessary information into the CAD system.

However, if the Offeror can offer a method that would directly interface the two systems to eliminate redundant data entry, the State would entertain a separately priced option for this capability.

8.4.4.11 Incident History

Once an incident is closed (all units cleared) and an incident disposition is captured, the software shall maintain the incident's details within the incident history files of the system.

The incident history shall include all information generated as part of the call-intake, dispatch, and unit status tracking process specific to each incident.

The incident history file shall allow for the on-line inquiry and display of closed incidents. Security shall control which users have the ability to access closed incidents, and which users have the ability to update or change closed incidents.

Incident history must be stored in a commercial, industrial strength relational database management system. A set of standard reports must be provided that can routinely generate tables, statistics, maps, and charts that are typically required to manage a Communications Center. Tools should be available for easily creating ad hoc reports. Offerors shall list the standard reports contained in, and the ad hoc report generation capabilities of, the Offered system.

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8.4.4.12 Unit History

The CAD system shall capture non-incident and incident-related unit history in a unit history file. User maintainable unit status codes shall be available to record various types of unit activity, such as lunch, out at shooting range, training, running radar, etc.

The unit history file shall allow for the on-line inquiry and display of unit activity. Information contained in this file may also be printed on any printer within the Communications Center or other workstations that have access to the CAD system network.

The unit history information should also be stored in the commercial, industrial strength relational database management system previously described. Standard and ad hoc reporting capabilities that access unit history information must be provided. Offerors shall list the standard reports contained in, and the ad hoc report generation capabilities of, the Offered system.

8.4.4.13 Field Initiated Events

The applications software shall provide a separate, pre-formatted input screen for field-initiated events. This screen shall be formatted to capture traffic stop or field-initiated activities or field-generated incidents. This screen shall have a field to indicate whether the unit is on the scene. Fields must also be provided for Vehicle/ACJIS-related information. The license plate number shall automatically generate an ACJIS/NCIC and local RMS vehicle inquiry to provide wanted and registration information on the vehicle. Offerors are to discuss the integration and access to this type of information from a Dispatcher CAD workstation. Associated status timers shall apply for this type of incident as well.

Mobile Data Computer (MDC) equipped vehicles shall be able to enter the above information on their mobile computers and to digitally transfer that information to the CAD system. In no event shall it be possible for a unit to stop a car and run a license plate without the controlling Dispatcher being informed of its activity. Officer safety must be ensured through proper notification of supervisory and Communications Center personnel of the activities of MDC equipped vehicles. Offerors shall explain how their systems provide these capabilities, while ensuring officer safety.

8.4.4.14 Pending Incident Queue

The software shall provide an interactive, dynamic incident queue for maintaining incidents or calls for service awaiting dispatch. Incidents awaiting dispatch in the incident queue shall be sorted first by priority and then within each priority by time elapsed since the incident was received.

8.4.4.15 Pending Incident Display

The software shall provide a display of pending incidents on the same workstation/terminal that is used for dispatching (interactive terminal). This shall be in a split screen or separate window.

The Dispatcher shall be able to scroll/page the pending incident display if there are more pending incidents than can be displayed at one time.

8.4.4.16 Pending Incident Timers

The software shall provide for timers, based on incident type and whether "in progress," "just occurred," or not, for pending dispatches. The software shall highlight the display of any pending incident that has exceeded the timer. A function shall be provided to reset the timer without the need to recall the pending incident to the screen.

8.4.4.17 Transferring Units

Often it becomes necessary to send a unit to an incident in a patrol district that is under the control of a different Dispatcher. Therefore, CAD shall allow control of individual units or groups of units to be transferred from one dispatch group or position to another group or position.

8.4.4.18 Transferring Incidents

Similar to transferring units, there are times when control of an entire incident, and all units assigned to the incident, need to be transferred to another dispatch group or position. The CAD system shall provide this functionality using a single abbreviated command.

8.4.4.19 Transferring Dispatch Position Responsibilities

CAD shall provide the ability to transfer entire dispatch group or position responsibilities and all associated units and incidents to another dispatch group or position. This will be used when one Dispatcher covers for another while they are on break or during periods of low activity.

8.4.4.20 Communications Supervision

Functionality required for the communications Supervisor includes all of those shown above as required under incident receipt and dispatching plus:

a) Capability to monitor any workstation on the CAD system.
b) Ability to interactively determine the workload and response times for Dispatchers and Call Takers.
c) Capability of making changes to CAD system support files based upon applicable security.
d) Ability to display the ten most recent incidents.
e) Capability of studying current system loading and system resource utilization.
f) Ability to accept automatic notifications of user-defined "serious-nature" incidents.

A system administrator at each dispatch center shall have the authority to make adjustments in the system as required by staffing changes.

8.4.5 Tactical Map Display (TMD)

The CAD system must have a seamlessly integrated computerized map, which is a digitized map (GIS database) supporting Tactical Map Display (TMD). The TMD must support the automatic display of units as derived from the AVL system.

A map-centric TMD, in which the GIS/map is fully integrated with the CAD system, is preferred. However, mapping component systems, in which a separate TMD application is linked to the CAD system, may be offered. In either case, a single keyboard and pointing device must control both the TMD and main CAD workstation.

The geo-file supporting the CAD system must be the same geo-file used to support the TMD. The geo-file may undergo processing to be "formatted" for use by either CAD or the TMD. However, manually maintaining two separate geo-files, one for CAD and one for the TMD, will not be accepted.

The TMD system shall have the following minimum functions:

a) Full color display at a screen resolution of no less than 1280x1024.
b) Display all street/roadway data (such as freeways, major streets, minor streets, curb to curb, etc.), hydrology data (such as rivers, streams, drainage canals, lakes, etc.), and all railroads, bridges, etc. Street/roadway data shall include all entrance/exit ramps for controlled access highways, dead ends and cul de sacs, etc. The display should use full color where appropriate to make the display more legible.

c) Have a screen refresh rate of no more than two seconds when new or update data is received.

d) Pan and zoom – the system must provide a mechanism for panning and zooming around the area covered by the TMD. Users will be able to zoom to a specific location at a specified zoom scale or to interactively indicate a rectangular area that should occupy the entire map.

e) Default zoom scales – the TMD should provide a default set of zoom scales. As users zoom in and out of these zoom scales, different (appropriate) information is displayed on the map. For example, when viewing the entire dispatch area, only major roads and freeways are displayed. However, when zooming into a neighborhood, building footprints, individual address numbers, street curbs, and other detailed information is displayed. The system administrator must be able to modify the default geographic layers that are displayed at each zoom scale.

f) The system must utilize advanced spatial analysis techniques to:
   i) Assign the closest appropriate unit with jurisdictional/area responsibility.
   ii) Calculate the shortest path (via streets and roadways, not straight-line calculations) for dispatched vehicles.
   iii) Display floor plans and site detail information for incidents.
   iv) Zoom and pan around the jurisdiction by the use of mouse drag on slide bar or mouse click on appropriate directional icons.
   v) Center on an address or location when the Dispatcher selects the associated event.
   vi) Center on a specific unit if that unit's emergency button is activated.
   vii) Center on a specific event location when the Dispatcher recalls the associated event from the CAD status monitor.
   viii) Display different layers of graphic information such as Law Enforcement, Fire, and EMS jurisdictional boundaries and response zones, hydrant locations, unit locations, driveways, building locations, building footprints, etc.
   ix) Identify crime patterns (automated pin maps).
   x) Spatially aggregate incident and case information.

g) The digital map must be able to display all or selected sets of validated locations entered into the CAD system.

h) Boundary files:
   i) The system must support a practically unlimited number of boundary types. Each boundary type shall be treated as a unique geographic layer.
   ii) Typical boundary file layers shall include:
      (a) Response areas (e.g., Patrol Districts, etc.).
      (b) Jurisdictional (Agency, County, State, etc.).
      (c) Statistical (census tracts, census blocks, etc.).

(d) Administrative (neighborhood watches, park, etc.).
(e) Commercial (mall, zoo, etc.).

i) Point Locations -- the system must support a practically unlimited number of point layers. Each point location type shall be treated as a unique geographic layer
  i) Landmarks -- common names, building numbers, landmarks, etc.
  ii) Mile markers – locations along freeways, highways, and other roadways
j) Iconic symbols:
  i) Units and District Headquarters – the system must support multiple icons representing ambulances, Fire apparatus, Law Enforcement cars, fire hydrants, Patrol District Headquarters, schools, etc. These icons shall be proportionately sized to match the map size. When the map is displaying the entire dispatch area, all vehicles shall be clearly displayed. Each icon shall display the unit identification number within, either immediately above, or immediately below the icon. All structural icons must display the facility name (i.e., District 2 HQ, Avery Elementary, etc.) either within, immediately above, or immediately below the icon.
  ii) Incidents – the system must support multiple icons representing AZHP, Law Enforcement, Fire, or EMS incidents. Ideally, different icons will be used to display more specific information about the nature of the incident (i.e., a handgun representing an armed robbery, a building with flames representing a structure fire, etc.).
  iii) Vehicle clustering – the system must provide a "cluster" icon for multiple vehicles at one site. Each icon must uniquely represent the presence at the site of multiple vehicles, and, by mouse click, cause a window to pop up which will display data about all vehicles represented by the icon.
  iv) Incident clustering - the system must provide a "cluster" icon for multiple incidents at one site. Ideally, different icons will represent multiple events at one site, and, by mouse click, cause a window to pop up which will display data about each incident represented by the icon.

8.4.6 Management Information System (MIS) and Reporting

Reporting is an extremely important area for the Operations Communications Center and to the personnel assigned to each Dispatch Center. The State prefers that historical incident and unit information be stored in a commercial off the shelf (COTS) relational database management system so that (1) the integrity of the data is protected and (2) that new applications and reports can be easily created without the need for consulting outside assistance.

As long as the type and content of the reports provided in the system is adequate, the exact format of reports is flexible. In addition to tabular type reports, the ability to easily create maps, charts, and graphs from historical CAD information is highly desirable. All Offerors are required to submit samples of all "pre-defined" CAD reports available from their Offered system.

An "ad hoc" reporting feature is also required so that reports may be generated using any data element in the CAD system. This "ad hoc" feature must be easy to understand and use without knowledge of computer programming. If the offered reports are to be provided using the ad hoc reporting tool, the Offeror shall indicate this in their proposal. All required costs, including necessary training, shall be included in the Offeror's response to this RFP.

8.4.7 Geo-File Requirements

The CAD system's geo-file and geo-file maintenance is of extreme importance to the successful implementation and on-going support of the CAD system. The Offeror is to place special emphasis on proven technologies and providing the Department of Public Safety with a solution satisfying the requirements listed in this section.

The CAD system shall support coordinate-based operations, as the State has interest in the implementation of Global Positioning Satellite (GPS) based Automatic Vehicle Location (AVL) systems. In other words, the system shall use X-Y (either latitude and longitude or State Plane) coordinates to do searches for hazardous materials and premise information in number of feet around the location of an incident.

The geo-file system shall provide the capability to establish response zones, beat boundaries, Police beats, street networks, and other geographical layers using typical mapping/GIS tools. This system shall be provided by the Offeror. However, once installed, it shall be able to be maintained and/or changed by the State.

The State currently uses Environmental Systems Research Institute's (ESRI) ArcGIS 8.1 to maintain and enhance its geographic information system's databases and applications. In the future, ArcEditor (Arc/IMS) will be the main GIS tools used by the State. The system operates on PC based workstations. The GIS data maintained and/or organized by the State is available on the Department's Novell Server.

8.4.7.1 GIS Data

The State maintains a street centerline and address file. Presently, the Database is maintained by a GIS Coordinator. Very little original work is completed by the department. The database is derived from GIS data submitted by State, local and regional agencies. Data submissions occur twice a year from participating agencies. However, updates may be provided on a monthly, quarterly, or annual basis. Since the schedule for submissions vary with each participating agency, updates can be submitted at any time. For high-priority, statewide projects, new GIS data is added on a daily basis.

8.4.7.2 Jurisdiction (Geography)

The AZ Highway Patrol is responsible for U.S. and State Highways and freeways. However, the Criminal Investigations Division (CID) can go anywhere in the State to conduct its investigations and to operate its task forces. Therefore, the Arizona Department of Public Safety can dispatch and monitor officers anywhere within the State of Arizona. Therefore, the GIS database must cover the entire state.

8.4.7.3 Data Accuracy

The coverage of the database currently maintained by the State must meet a minimum accuracy standard of 80%; meaning that at least eighty percent of the streets/features of an area must be accurately located and included in the database. However, depending on the origin of the data, the coverage/accuracy can range as high as 97%. DPS staff identifies errors or problem areas in the GIS data and reports them to the originating agency. The agencies then fix the data and re-submit the corrected data.

Arizona Department of Transportation (ADOT) is the primary data collector. The data provided by ADOT is of sub-meter accuracy. For the state's roads and highways, the GIS data provided by ADOT contains sufficient detail to display every lane on divided roads, on and off ramps and other detailed information.

The GIS data has the following characteristics:

- Typically generated via Global Positioning Satellite (GPS) systems
- Plus or minus 50 feet
- 92 percent complete in Metro Phoenix area
- 92 percent complete in Tucson
- 75 percent complete in the rest of the State

- Data for the State's Indian Reservations is currently incomplete. DPS staff, however, is in the process of filling in missing areas by using aerial photographs to capture the information.

8.4.7.4 Data Organization

The data is organized (tiled) as follows:

- Organized by County
- Organized by City where appropriate
- The data conforms to the NAD 83 standard.
- The entire database is 500 Megabytes
- Speed limits are currently being added to the file

8.4.7.5 Other Available GIS Applications

- ESRI/IMS (Internet Mapping Service) – provides the ability to push GIS data on to the Internet. ESRI/IMS provides browser access to GIS data published by DPS (e.g., crime trends, accident locations, etc.).
- Incident Management – E-team software. Large screen map display support for Emergency Operations Center. Could also assist in the Dispatch Centers.
- FHMA – Mile marker by mile marker video (still shots) organized in a graphic database. ADOT maintains the database. The database is 110 Gigabytes.

8.4.7.6 Geo-file management System Requirements

The geo-file management system shall support the following (at a minimum):

a) The structure shall support the return of both cross streets when an address is given which fits into a valid address range.

b) The system shall support the ability to maintain streets, Patrol District boundaries (zones), Local Agencies boundaries, commonplace names, census tracts, etc. These shall be developed and changed by using GIS/mapping, preferably through existing GIS tools rather than through static tables.

c) The CAD geo-file shall be able to be maintained while the CAD system is on-line. Strict security provisions shall be provided to help control the integrity of the geo-file. The Offeror's geo-file manager must provide a transaction level update. Audit trails of geo-file changes must be maintained by the system.

d) The geo-file manager should support an automatic assignment process. When editing a boundary, the system will automatically assign the

proper boundary codes to affected streets. A manual assignment process should not be required to assign the proper boundary codes to streets segments (blocks) affected by the boundary edits. The system will automatically assign to the street the new geo-file layers when the user completes the edits.

e) All system boundaries must be registered to the geo-file's street centerline. All boundary assignments (i.e., determining the response zone and jurisdiction for each incident) are to be completed in real time by processing the incident's X-Y coordinate against the street centerline and boundary files to determine the incident's location and the appropriate jurisdiction.

f) The system should be able to support rural areas that still maintain route and box number addressing. Offerors are to indicate how their respective systems accommodate rural addresses and the impacts that are presented to the CAD system by these non-standard addresses.

g) The geo-file should support parcel level GIS information, in which the approximate location of the front door of all the parcels is stored in the geo-file. The CAD system must be able to use this information for address validation and to determine an incident's location.

h) The geo-file should support the storage of building footprints and other images (pictures of specific buildings) that are associated with specific addresses.

The geo-file system shall support the following features:

a) Once an incident is initiated into the CAD system, the location verification step shall add the coordinates of the incident location to the incident record and display an incident icon on the tactical map display.

b) During incident initiation, the CAD system shall make a duplicate incident check based upon the location and/or coordinates of the incident. If, during incident initiation, a potential duplicate incident in the area is found, the user shall be notified via a prompt and shown a list of the potential duplicate(s). The CAD system must have a parameter (modifiable by the system administrator) specifying the distance in number of feet, or similar function, from the location of the incident for duplicate incident detection.

c) Location databases such as hazards, general premise information, street closures, and other user definable databases shall be defined in the geo-file system. The CAD system will perform a distance search to identify the existence of location information (hazards, etc.) during the incident initiation process. The system must support different search distance criteria for different types of locations (e.g., a Law Enforcement versus a Social hazard). The system administrator must be able to modify these parameters.

8.4.7.7 Transaction Loading

The CAD system Offered must meet the sizing criteria specified in the RFP. The following is a summary of database sizing requirements:

a) The CAD system must be sized to meet the expected 2002 levels plus a yearly increase of ten percent for the next ten-year period.

b) The CAD system must be sized for a minimum of 180 days of on-line incident information. This includes the basic incident information plus all incident and unit transactions (i.e., unit assignments, status changes, comments, etc.), whether they are associated with an incident or not. Offerors should indicate options with associated cost for the following longer terms of online incident storage:
   i) One year.
   ii) Eighteen months.
   iii) Two years.

c) The CAD system must be appropriately sized to include disk space for the reload of a minimum of seven days of archived incident and audit trail media.

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Phoenix, Arizona 85009
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9. MOBILE DATA COMPUTER SYSTEM (MDCS)

The MDCS is anticipated to be comprised of several components including a RF infrastructure, vehicular computing apparatus and a variety of applications designed to allow for field users to perform described functions while operating out of their vehicle.

A paragraph-by-paragraph response shall be provided indicating compliance with the described requirements, specifications and functions for this section of the RFP. If the Offeror takes exception to a specific point, they shall fully describe their exception in the corresponding section. If the same exception is taken to multiple items, the exception should be reproduced in its entirety for each exception. Responses like "see section", or "same as above" are not acceptable.

9.1 RF Infrastructure

The RF infrastructure is assumed to be comprised of two primary components a network controller and base stations, both must be designed for continues operation.

9.1.1 Site Pool

The following table details the sites that the State has determined to be candidate sites for the RF infrastructure. The Offeror is required to evaluate the use of these sites to design a cost effective and reliable network utilizing all or some of these locations. The selection of the most appropriate sites to provide the largest coverage area, while still ensuring that capacity and appropriate redundancy is accounted for is the responsibility of the Offeror.

Table 1 – Available RF Sites

Site Name	ID	Latitude (NAD 27)	Longitude (NAD 27)	Elevation (Meters)	Antenna Height (Meters)
Keystone Peak	KP	31:52:38.0 N	111:12:53.0 W	1883	27
Mount Lemmon	ML	32:26:25.0 N	110:47:13.0 W	2774	46
Nogales Hill	NH	31:20:20.0 N	110:57:10.0 W	1310	43
Shaw Butte	SB	33:35:38.0 N	112:05:11.0 W	655	18
Signal Peak	SP	33:17:37.0 N	110:50:09.0 W	2377	40
South Mountain	SM	33:19:57.0 N	112:03:58.0 W	817	30
Thompson Peak	TP	33:38:39.0 N	111:48:41.0 W	1185	6
Tumamoc Hill	TH	32:12:51.0 N	111:00:18.0 W	945	25
White Tanks Mountain	WT	33:34:02.0 N	112:33:29.0 W	1225	37

9.1.1.1 ADD-OPTION for MARICOPA COUNTY:

To meet the coverage requirements of Maricopa County, the Offeror is required to include these additional two sites in its design.

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Table 2.1 – Additional RF Sites

Site Name	ID	Latitude (NAD 27)	Longitude (NAD 27)	Elevation (Meters)	Antenna Height (Meters)
Towers Mountain	TW	34.14.03 N	112.22.02 W	2324	30
Oatman Mountain	OT	33.03.06 N	113.08.06 W	524	30

9.1.2 Frequency Pool

The following table details the frequencies that the State has determined to be candidates for the RF infrastructure. The Offeror is required to evaluate and select frequencies that will perform effectively in their intended service area. The selection of the most appropriate frequencies for any site is the responsibility of the Offeror. However, there are restrictions on these frequencies based upon rural vs. urban, and Mexican border use. All channels have adjacent guard bands which are presumed to allow for 20KOF1D data operations.

9.1.2.1 800 MHz Group

The following frequencies are available for the primary DPS system. If the Maricopa County Option is selected, an additional frequency or frequencies will be available from the County frequency pool.

Table 3 – Available RF Frequencies

Transmit	Receive
866.47500	821.47500
866.53750	821.53750
867.47500	822.47500
866.48750	821.48750
858.00000	813.00000
858.96250	823.96250
867.53750	822.53750

9.1.2.2 700 MHz Group

Table 4 – Available RF Frequencies

Transmit	Receive
794 through 806	764 through 776

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The FCC has granted a State License (WPTZ765) for All State channels to Arizona Department of Public Safety.

9.1.3 Initial Coverage Requirement

While the State is interested in ultimately building a network that provides statewide coverage, the initial phase only requires that the Offeror provide coverage in the defined areas. The area intended to be covered initially is described in two forms the first is graphically. The map found in Figure 3 – Initial Coverage Goal, is intended to graphically represent the intended area to be covered. The Offeror must recommend the configuration of sites that will allow for adequate coverage and capacity needs as described in this RFP to be met or exceeded.

The other method of describing coverage is included in Table 5 - Mile Marker Defined Initial Coverage. This table documents the highway mile markers for each highway that is within the initial coverage goal area. These defined stretches of highway are the areas that the State desires coverage initially.

9.1.3.1 ADD-OPTION for MARICOPA COUNTY:

The Offeror must recommend the configuration of sites from Table 7 and Table 7.1 that will allow for adequate coverage and capacity needs as described in this RFP to be met or exceeded. Figure 3.1 – OPTIONAL County Coverage Goal, is intended to graphically represent the intended area to be covered.

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Figure 1 – Initial Coverage Goal

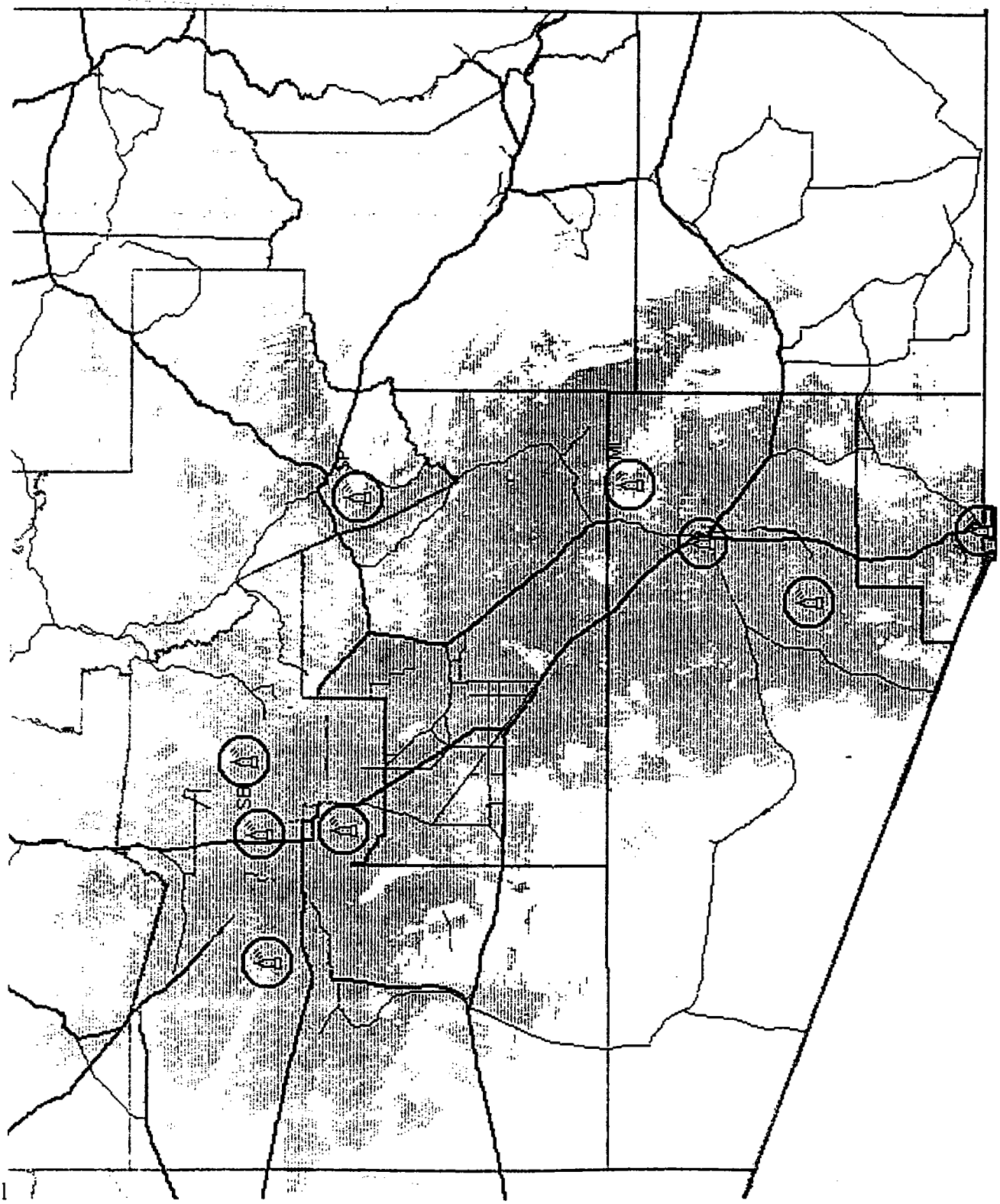

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Figure 3.1 - OPTIONAL County Coverage Goal

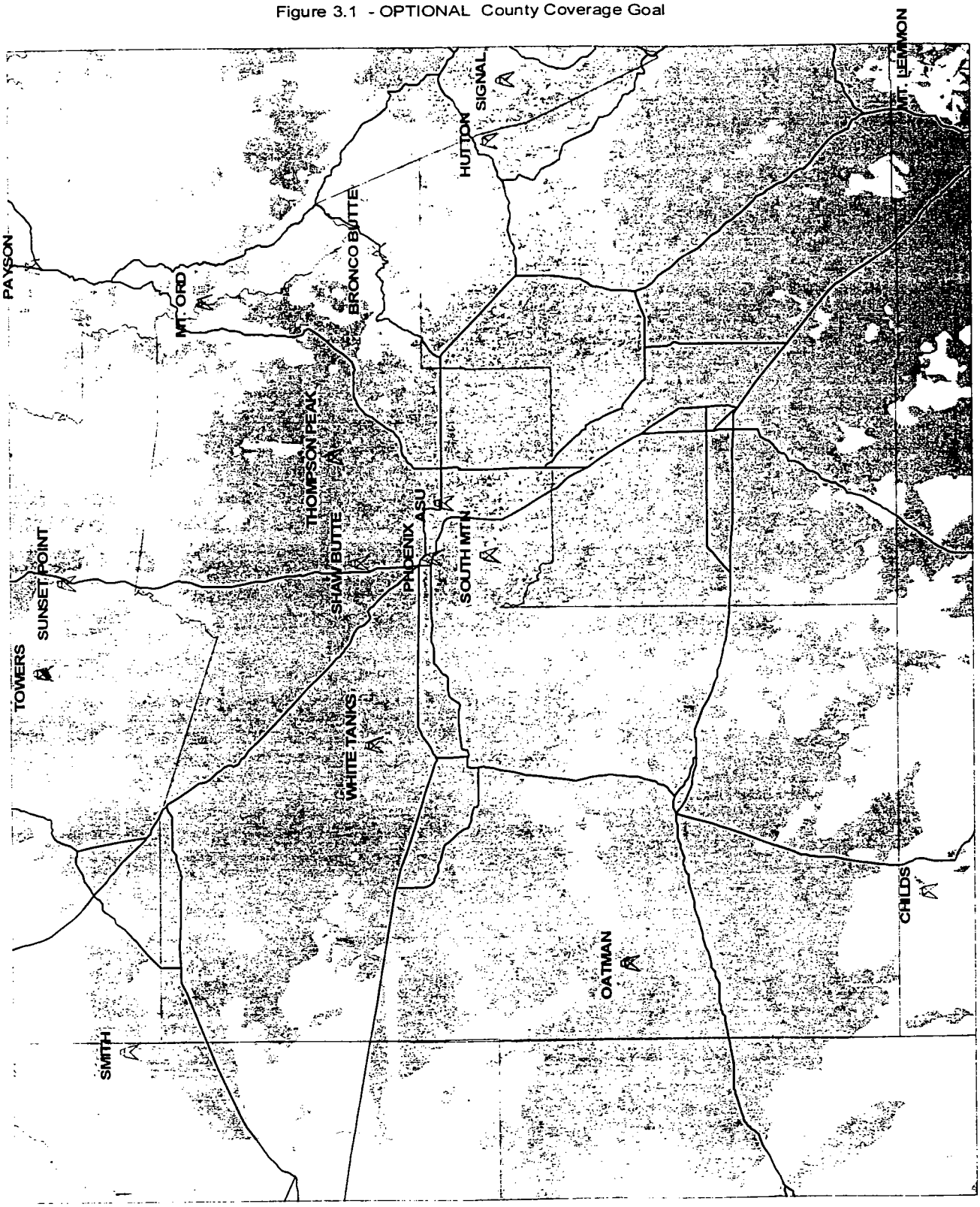

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Table 5 - Mile Marker Defined Initial Coverage

Highway	Starting Mile Marker	Ending Mile Marker
I-8	150	177
I-10	86	296
I-17	195	233
I-19	0	60
US-60	115	215
SR-74	0	30
SR-77	70	135
SR-79	91	150
SR-82	0	12
SR-83	50	58
SR-85	120	153
SR-86	144	171
SR-87	115	205
ADD – OPTION: COUNTY COVERAGE		
I-8	80	150
US-60	75	115
SR-85	0	33

9.1.4 Network Controller

9.1.4.1 Distinguishing Information

The manufacture name, model number (including any optional components model and part numbers which are Offered), computers name a well as photos showing the system from each relevant angle shall be included.

9.1.4.2 Main Processor

Intel-based i86/P6 Pentium Architecture.

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9.1.4.3 Clock Speed

The processor speed shall be provided in MHz. If a coprocessor or other methodologies to improve performance are utilized, they shall be described in full.

9.1.4.4 Memory

The memory shall be provided in MB installed with support for additional memory defined.

9.1.4.5 Power Requirements

All power requirements should be described including, but not limited to, voltage and amperage requirements for normal operation, start-up and any other condition, which is outside the range of these values. It shall be expressed in volts, tolerance level and amps.

9.1.4.6 Hard Disk Drive

The quantity, configuration, (Mirrored, RAID, etc.) and size of each disk drive Offered shall be documented in GB.

9.1.4.7 Other Storage Mediums

The quantity and type of all other storage mediums (Tape, CD, DVD, etc.) Offered shall be fully described.

9.1.4.8 Reliability

The systems reliability should be described in terms of Mean Time Between Failures (MTBF) described in hours of continuous operation.

9.1.4.9 Performance

The average transaction processing time should be described in terms of milliseconds when operating under loaded conditions as described elsewhere in this specification.

9.1.4.10 Initial Subscriber Support

The System shall be Offered in a configuration that is capable of supporting 500 units and still adhering to all other performance and reliability specifications as described herein.

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9.1.4.11 Future Subscriber Support

The expansion capabilities of the network controller shall be discussed and minimally include a clear migration path describing the ability to expand the system beyond the initial 500 user limit up to the largest supported configuration. This description must include the quantity of users supported in the maximum configuration which must be minimally expandable to 2500 units. The description shall define the additional RF items, IT hardware, and software required for incremental increases up to 2500 units, and include the add-on incremental costs.

9.1.4.11.1 ADD-OPTION for MARICIOPA COUNTY:

The system shall be offered in a configuration that is capable of supporting 600 subscriber units, over and above the requirements of the State, still adhering to all other performance and reliability specifications as described herein. The 600 additional units will be operated by Maricopa County employees within the boundaries of Maricopa County.

9.1.4.12 Network Controller Network Interface

Except for the RF site communication connectivity, the interface from the RF network controller is envisioned to utilize the LAN to interconnect to the other systems.

9.1.4.12.1 Physical Layer

The network controller shall support 10Base-T

9.1.4.12.2 Data Link Layer

The network controller shall support Ethernet

9.1.4.12.3 Network Layer

The network controller shall support Internet Protocol (IP)

9.1.4.12.4 Transport Layer

The network controller shall support Transport Control Protocol (TCP)

9.1.4.13 Subscriber Distribution

Describe the processes in place to manage the distribution of scribers across multiple towers in the case of over lapping coverage from multiple base stations.

9.1.4.14 Transmitters Supported

Describe the total number of transmitters (base stations) allowed on the Offered design and how many can the system be expanded to support. A minimum of 50 remote base stations must be supportable.

9.1.4.15 Recommended Location

The Offeror shall recommend a physical location for the network controller based upon the facility availability.

9.1.5 Base Station

This equipment must be of a design that is intended to be placed in an equipment shelter(s) and potentially exposed to a harsh RF environment. The Offered equipment shall be identified in the Offer.

9.1.5.1 Interface Description

The quantity and technical nature of the interconnecting circuits required shall be fully described with emphasis on the criteria listed below.

9.1.5.2 Over the Air Data Rate

Document the raw over the air baud rate, expressed in bits per second, however less that 19.2 Kbps is considered unacceptable based upon the available channels.

9.1.5.3 Date Rate Migration

The Offeror shall Offer a migration path to higher over-the-air data rates with their equipment. The cost and method of such a data-rate upgrade should be estimated.

9.1.5.4 Throughput Optimization

A system utilizing diversity antennas, at either the base station or the mobile client, or both, is encouraged in order to maximize the baud rate and effective throughput.

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9.1.5.5 Wired Interface Baud Rate

Describe the minimum and maximum acceptable link rate to the network controller.

9.1.5.6 Physical Interface

Describe the physical interface connection type for the network controller interface. The links between the RF sites and the central controller shall employ the State microwave infrastructure for connectivity. The State has a primary analog microwave system, except that in the Phoenix area, sites have T1 digital access. (South Mountain, White Tanks, Thompson Peak, and Shaw Butte)

9.1.5.7 Over the Air Communication Protocol

Describe the communication protocol used for this communication link and its ability to recover from errors.

9.1.5.8 Wired Communication Protocol

Describe the communication protocol used for this communication link.

9.1.5.9 Input Voltage

Describe the primary power requirements in terms of voltage and amperage draw based upon Offered design.

9.1.5.10 Receiver Data Sensitivity

Describe the sensitivity in dBm, noting the bit error rate, expressed as a percentage. (for example -110 dBm for 1% bit error rate)

9.1.5.11 Receiver Selectivity

Describe the selectivity in dB at the recommended channel spacing.

9.1.5.12 Receiver Intermodulation Rejection

Describe the rejection rate in dB.

9.1.5.13 Receiver Spurious & Image Rejection

Describe the rejection rate in dB.

9.1.5.14 Receiver Frequency Stability

Describe the stability in percentage, specifically stating the tolerable temperature range in degrees Fahrenheit (high and low).

9.1.5.15 Receiver Antenna Port Impedance

Describe the ports impedance in ohms.

9.1.5.16 Transmit Power

Describe the range (highest and lowest settings) of transmitting power in watts

9.1.5.17 Transmit Duty Cycle

The station must be rated for continuous duty.

9.1.5.18 Transmitter Frequency Stability

Describe the stability, expressed as a percentage, indicating the tolerable temperature range in degrees Fahrenheit (high and low).

9.1.5.19 Transmitter Antenna Port Impedance

Describe the ports impedance in ohms.

9.1.5.20 Channel Contention

Describe the channel contention method utilized and explain why it is superior to other common methodologies.

9.1.5.21 Error and Fault Handling

The MDCS shall provide transmission error and fault handling techniques. These techniques shall at a minimum provide the following features.

9.1.5.21.1 Error Correction

Describe in detail the Forward Error Correction (FEC) capabilities Offered.

9.1.5.21.2 Retransmission

Automatic retransmission of user data received in error by base or mobile subscriber shall be supported. The ability to configure and the recommended configuration shall be discussed.

9.1.5.21.3 Application Error Reporting

Reporting of failed message transmission to message sending application for display to the end user shall be supported. Examples of how this information will be presented should be described in detail and if available screen snap shots should be used to illustrate the point.

9.1.5.21.4 Detail Error Statistics

The ability to store, retrieve and clear RF related error statistics from and device in the RF path will be discussed. For example, if the vehicular modem stores the statistics the methods to access and reset the statistics (local/remote/specialized application or password needs should be addressed) will be described in detail. This would also apply to the base station and or network controller.

9.1.5.22 Send and Receive Message Definition

The message to be sent from the vehicle shall be determined based upon the message model data provided by the Offeror based upon the application(s) provided. Selection of the size will be determined by the State during the detailed design task. User data may be compressed and encrypted prior to transmission

9.1.5.23 Automatic Station Identification

The MDCS shall provide automatic base station identification in a format approved by the FCC. The interval at which this identification shall be transmitted shall be variable to meet FCC rules and still meet all operational requirements. This methodology shall be fully explained by the Offeror

9.1.6 Alarm Functionality

The MDCS shall support the reporting of fault and status alarms to a network management console. Alarms related to faults shall provide operator alert via audible and visual notification. Alarms shall be provided for the following fault conditions and be presented on the network management console with a status or fault description.

A. Radio data controller primary/standby switchover occurred (if provided).

B. Radio data controller hardware fault by controller

C. Radio data controller software fault by controller.

D. Radio data controller configuration fault by controller.

E. Host connection communications fault by host connection.

F. Base station site communications fault by site.

G. Base station site alarms by site.

9.1.6.1 System Alarm Logging

The MDCS shall support the logging of alarms to an alarm history log file accessible from a network management console that shall minimally store up to 30 days of alarm history.

9.1.6.1.1 Log Files

The log files shall have an automated mechanism to ensure that the files can be broken into separate files based upon predefined rules. The available rules such as daily, hourly, or based upon size will be described. The mechanism will also ensure that system performance is not jeopardized by excessive use of disk space.

9.1.6.1.2 System Alarm Forwarding

The MDCS shall support alarm forwarding to an external interface in SNMP format. Presently no system is configured to accept these alarms, but it may in the future. At that time, the State will take responsibility to enable the capture of the events.

9.1.6.1.3 Base Station Alarm Support

Each MDCS base station site shall support the reporting of fault alarms to a network management console. Alarms shall be provided for the following fault conditions.

A. Receiver malfunction.

B. Transmitter malfunction.

C. Antenna system malfunction.

D. Power malfunction.

E. Logic malfunction.

9.1.6.1.4 System Status

The MDCS shall support the presentation of the following system status information.

A. Days, hours, minutes since last radio data controller reboot.

B. Host(s) connection status.

C. Base station site connection status.

D. Currently operational/enabled base station sites.

E. Currently not operational/disabled base station sites.

F. Current list of authorized mobile unit identifiers.

G. Which radio data controller is active and which is in standby mode.

9.1.6.1.5 Site Diagnostics

Each site shall support diagnostics from a network management console. Diagnostics shall be provided for the following.

A. Site communications integrity check.

B. Base station logic integrity check.

9.1.6.1.6 Mobile Unit Diagnostics

Each mobile unit shall support diagnostics from a network management console. Diagnostics shall be provided for the following.

A. Mobile unit communications integrity check.

9.1.6.1.7 Base Station Site Statistics

Base station site statistics reporting shall be supported from a network management console. Statistics shall be provided for the following.

A. Total radio data controller communications failures.

B. Total user data messages sent outbound.

C. Total user data messages received inbound.

D. Total user data RF protocol packets sent outbound.

E. Total user data RF protocol packets received inbound.

F. Total failed packets sent outbound.

G. Total retransmissions (after failed initial attempt) received inbound.

9.1.6.1.8 System Statistics

System statistics reporting shall be supported from a network management console. Statistics shall be provided for the following.

A. Host connection communications failures by host.

B. Total user data messages sent for each host connection.

C. Total user data messages received for each host connection.

D. Total user data messages sent to all host connections.

E. Total messages received from all host connections.

F. Total user data messages sent outbound to sites.

G. Total user data messages received inbound from sites.

H. Total user data RF protocol packets sent by all sites outbound.

I. Total user data RF protocol packets received from all sites inbound.

J. Total failed packets sent by all sites outbound.

K. Total retransmissions (after failed initial attempt) received by all sites inbound.

9.1.6.1.9 Mobile Unit Statistics

A. Total user data messages sent outbound to mobile unit.

B. Total user data messages received inbound from mobile unit.

C. Total user data RF protocol packets sent outbound to mobile unit.

D. Total user data RF protocol packets received inbound from mobile unit.

E. Total retransmissions (after failed initial attempt) received from mobile unit.

F. Total failed packets sent to mobile unit.

9.1.6.1.10 Network Management Remote Access

The MDCS shall support remote dialup access to all network management functions identified elsewhere. The Offeror shall provide three (3) sets of any necessary proprietary hardware and software required for the remote users to have this capability. Commercially available hardware and software need not be provided but must be described in sufficient detail to ensure the correct components are utilized.

9.2 One Piece – Vehicular Hardware

This is one of the three styles of vehicular computers that are desired. The Offeror must determine the appropriate quantity of these platforms to be provided based upon taking the number necessary to perform the load testing of the system and dividing it by three. In other words if twelve computers are necessary to perform the load test the Offeror shall provide four (4) of this style computer as part of the deliverables following the notice to proceed. The State will then evaluate the units for a period of time. If one or more models is determined to be acceptable for operation, the desired quantities of the acceptable model(s) will then be ordered.

The Offeror is reminded that specifications listed are considered minimum specifications as determined by the State. However, the Offeror is responsible for ensuring the components supplied will operate efficiently. If higher standards are required for effective operation based upon the other products, services, and applications offered, they must be offered in that configuration.

The State understands that Ruggedized equipment is typically more costly initially to implement. Any information about the cost benefits / trade-off between these and consumer grade computers would be welcomed.

9.2.1 Distinguishing Information

The manufacture name, model number (including any optional components model and part numbers which are Offered), computers name a well as photos showing the system from each angle shall be included. All specifications are for the computer as a standalone unit unless specifically stated that the feature is not resident in the computer.

9.2.2 A/C Adapter

A 120 VAC adapter shall be Offered as an option for portable computers.

9.2.3 Air Bag Deployment

All vehicular installations shall be such that they do not interfere with the driver side air bag deployment when stowed. If intrusion into the passenger side, air bag

deployment area, specific notation must be made. In some vehicles, interference with the air bag may not be an acceptable configuration.

9.2.4 Airborne Contaminates

Performance shall not be degraded in the presence of dust, smoke, or moisture.

9.2.5 Auto Power Sensing

The CPU, display, and keyboard shall use the internal battery to allow for graceful shutdown upon loss of vehicle power.

9.2.6 Battery Life

Shall be documented in minutes of continuous unpowered operation.

9.2.7 Battery Type

Shall document the chemical composition of the type of rechargeable battery offered, such as Nickel-Cadmium, Nickel-Metal-Hydride, Lithium Ion, etc.

9.2.8 Bracket Selection

The external edges and corners of passenger compartment components must be rounded and shall be padded where practical. The mounting bracket shall permit horizontal swivel and tilt adjustments. It shall be mounted, wherever possible, in such a way to provide viewing convenience and keyboard operation by either the passenger or driver. All swivel mounts shall have a positive means of locking them in the desired position to prevent shifting while the vehicle is in motion.

9.2.9 Carrying Handle

If the unit is portable, a sturdy carrying handle shall be provided on the computer housing.

9.2.10 CD ROM Drive

If offered, it shall be included as an option.

9.2.11 Clock Speed

The processor speed shall be provided in MHz. If a coprocessor or other methodologies to improve performance are utilized, they shall be described in full.

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9.2.12 Cursor Control

Beyond the touch screen capabilities, an integrated mouse shall be provided. The type of mouse provided shall be described such as Trackball, Touch pad, and Joystick.

9.2.13 Display Specifications

The screen shall be designed for reliable operation in the mobile environment.

9.2.13.1 Brightness Control

A brightness and contrast control shall be easily accessible to the operator.

9.2.13.2 Colors

The total number of colors supported by the display shall be provided.

9.2.13.3 Viewing Area

The diagonal screen width shall be stated in inches, with a minimum of 12 inches.

9.2.13.4 Viewing Angle

The maximum viewing angles shall be described in degrees.

9.2.13.5 Screen Area

The number of pixels shall be stated for both the X and Y-axis.

9.2.13.6 Screen Readability

The display unit shall be easily readable in direct sunlight. The display shall be designed in such a way that the effects of reflected light during day or night operation, including keyboard illumination, will not preclude normal viewing and use. The screen must also be visible in conditions of no-external light source. The actual NIT (cd/m2) rating shall be provided.

9.2.14 Docking Apparatus

If a docking station shall be provided it shall be designed to withstand docking iterations in excess of 25,000. The actual number shall be provided.

9.2.15 Drop Resistance

4 feet to non-yielding surface without loss of data while operational.

9.2.16 Electromagnetic Interference (EMI)

EMI levels shall not interfere with the existing radio communication or other equipment in the vehicles.

9.2.17 Existing Equipment

If practical and economically sound, the mounts shall be designed to take advantage as much as reasonably possible the existing installation.

9.2.18 Floppy Drive

3.5" removable disk drive shall be offered as an option.

9.2.19 Hard Disk Drive

The internal disk drive shall be documented in GB, it is anticipated that a minimum of 20 GB will be required, however the Offeror is responsible for determining the minimum necessary based upon the application requirements.

9.2.20 Housing Material

The housing material of passenger compartment components shall be such to prevent deformation or warping when subjected to repeated exposure to direct summer sunlight inside vehicles with the windows rolled up. The ability to withstand temperature extremes is a particular concern based upon the local weather conditions. Any design efforts to increase the systems life span shall be documented.

9.2.21 Humidity

The unit shall be designed to operate in a wide range of humidity. The Offeror shall document the upper and lower extremes for the unit as Offered in percentage of relative humidity.

9.2.22 Industry Experience

The manufacturer of the components must be a reputable company with a minimum of five (5) years of experience.

9.2.23 Keyboard

The keyboard shall be 76-key full QWERTY, which is designed for reliable operation in the mobile environment. The keyboard assembly must employ keys that, give the operator a sense of a solid touch when pressed, employs sculptured keys, and full key travel. All keystroke combinations or unique keys available on the CAD system keyboards must be supported from this unit.

9.2.24 Keyboard Illumination

Illumination of the keyboard for night operation shall be provided. This control shall include the ability to adjust the intensity from a visible level to an off or invisible level. This is to prevent illuminating users at night. A backlit keyboard is the preferred method, however other alternatives will be considered. A description of the ability to control the lighting and the methodology employed shall be described.

9.2.25 Main Processor

Intel-based i86 Pentium Architecture.

9.2.26 Mean Time Between Failures (MTBF)

All units provided shall have a published MTBF.

9.2.27 Memory

The memory shall be provided in MB installed with support for additional memory defined.

9.2.28 Mounting Location

The computer must be elevated above the floor of the vehicle in between the seats for sedan type vehicles. In the case of a truck, the unit must be mounted such that it can be operated by the appropriate staff. The offering shall clearly describe the recommended mounting position and its associated cost for each type of vehicle.

9.2.29 Mounting Strategy

Access to any components that would be serviced while in the vehicle must be considered in the mounting strategy. An example is if a fuse is located on the back of a device, the optimum mounting position would allow for access to the fuse without removing the device.

9.2.30 Ongoing Support

The manufacturer of the components must provide, and have a parts support system, capable of providing parts for a period of five (5) years. This will be measured from the date of system acceptance.

9.2.31 Upper Operating Temperature

The unit shall be designed to operate in a wide range of temperatures, typical of the southwest environment. The Offeror shall document the upper extreme supported by the unit as Offered in degrees Fahrenheit.

9.2.32 Lower Operating Temperature

The unit shall be designed to operate in a wide range of temperatures. The Offeror shall document the lower extreme supported by the unit as Offered in degrees Fahrenheit.

9.2.33 PCMCIA Ports

The number of Type II PCMCIA slots available for future devices shall be documented.

9.2.34 Performance

All computers shall be offered in such a configuration that the computer does not act as a significant bottleneck in the process. The memory, processor speed, and any other relevant parameters shall be selected with the intended application in mind and have enough additional performance to be able to operate through several revisions of the application.

9.2.35 Power Issues

The power system shall be designed so that voltage variations and electrical noise in a normal vehicle electrical system will not cause problems. The unit shall not lose or alter stored or displayed information while operating on the vehicle battery or during the switch between the vehicle battery and the computer battery.

9.2.36 Power Requirements

The voltage and amperage requirements shall be provided for normal operation, start-up and any other condition, which is outside the range of these values. It shall be expressed in volts, tolerance level and amps.

9.2.37 Power Switch

Both the computer and the docking station shall include an ON/OFF switch. The switch will be designed such that it prevents accidental turn off a designed such that it can be located in low light conditions by an operator wearing gloves.

9.2.38 Previous Installs

The Offeror shall include at least two (2) photographs and/or illustrations of vehicle installations in typical police vehicles.

9.2.39 Radio Modem

The unit shall support no less than two modems.

9.2.40 Removable Computers

For computers that are provided with a docking apparatus the removable of the computer should not involve the connecting or disconnecting any cables to remove the unit.

9.2.41 Repetitive Shock

The Offeror shall describe the unit's resistance to shock encountered because of being dropped or while operating in the vehicular environment.

9.2.42 Repetitive Vibration

The Offeror shall describe the unit's resistance to vibration while operating in the vehicular environment.

9.2.43 Serialization

All computers supplied shall have a unique serial number for asset management.

9.2.44 Serial Ports

The number of serial ports available for future devices shall be documented.

9.2.45 Shock Mounting

Components shall be "Shock Mounted" or otherwise stabilized in order to reduce the effects of shock and vibration created in a mobile environment.

9.2.46 Speaker

The unit shall have audible alert capability with adjustable volume level.

9.2.47 Spill Resistance

The keyboard shall be protected against direct spills of liquids including liquids containing sugars. The methodology employed to prevent liquid intrusion shall be described

9.2.48 Upper Storage Temperature

The unit shall be designed to be stored in a wide range of temperatures as found in the region. The Offeror shall both document the upper extreme for the unit as Offered in degrees Fahrenheit and describe what assurances the Offeror can provide that this value will be sufficient for the intended application.

9.2.49 Lower Storage Temperature

The unit shall be designed to be stored in a wide range of temperatures as found in the region. The Offeror shall both document the lower extreme for the unit as Offered in degrees Fahrenheit and describe what assurances the Offeror can provide that this value will be sufficient for the intended application.

9.2.50 Stowed Position

All equipment shall support a stowed position. When the equipment is properly stowed, the equipment shall not become a projectile in the case of a crash. The stowed position shall not preclude the ability to receive and respond to CAD dispatch communications.

9.2.51 Theft Prevention

If a docking station is Offered, it shall have the ability to physically lock the computer in the vehicle and require a key to remove the unit.

9.2.52 Touch Screen

The screen is preferred to be operable by a gloved hand. The technology such as Resistive, Capacitive, Projected capacitive, Infrared, Surface acoustic, and Guided acoustic employed shall be described.

9.2.53 USB Port

The number of USB ports available for future devices shall be documented.

9.3 Two Piece – Vehicular Hardware

This is one of the three styles of vehicular computers that are desired. The Offeror must determine the appropriate quantity of these platforms to be provided based upon taking the number necessary to perform the load testing of the system and dividing it by three. In other words if twelve computers are necessary to perform the load test the Offeror shall provide four (4) of this style computer as part of the deliverables following the notice to proceed. The State will then evaluate the units for a period of time. If one or more models is determined to be acceptable for operation, the desired quantities of the acceptable model(s) will then be ordered.

The Offeror is reminded that specifications listed are considered minimum specifications as determined by the State. However, the Offeror is responsible for ensuring the components supplied will operate efficiently. If higher standards are required for effective operation based upon the other products, services, and applications offered, they must be offered in that configuration.

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9.3.1 Distinguishing Information

The manufacture name, model number (including any optional components model and part numbers which are Offered), computers name a well as photos showing the system from each angle shall be included. All specifications are for the computer as a standalone unit unless specifically stated that the feature is not resident in the computer.

9.3.2 A/C Adapter

A 120 VAC adapter shall be Offered as an option for portable computers.

9.3.3 Air Bag Deployment

All vehicular installations shall be such that they do not interfere with the driver side air bag deployment when stowed. If intrusion into the passenger side, air bag deployment area, specific notation must be made. In some vehicles, interference with the air bag may not be an acceptable configuration.

9.3.4 Airborne Contaminates

Performance shall not be degraded in the presence of dust, smoke, or moisture.

9.3.5 Auto Power Sensing

The CPU, display, and keyboard shall use the internal battery to allow for graceful shutdown upon loss of vehicle power.

9.3.6 Battery Life

Shall be documented in minutes of continuous unpowered operation.

9.3.7 Battery Type

Shall document the chemical composition of the type of rechargeable battery offered, such as Nickel-Cadmium, Nickel-Metal-Hydride, Lithium Ion, etc.

9.3.8 Bracket Selection

The external edges and corners of passenger compartment components must be rounded and shall be padded where practical. The mounting bracket shall permit horizontal swivel and tilt adjustments. It shall be mounted, wherever possible, in such a way to provide viewing convenience and keyboard operation by either the passenger

or driver. All swivel mounts shall have a positive means of locking them in the desired position to prevent shifting while the vehicle is in motion.

9.3.9 Carrying Handle

If the unit is portable, a sturdy carrying handle shall be provided on the computer housing.

9.3.10 CD ROM Drive

If offered, it shall be included as an option.

9.3.11 Clock Speed

The processor speed shall be provided in MHz. If a coprocessor or other methodologies to improve performance are utilized, they shall be described in full.

9.3.12 Cursor Control

Beyond the touch screen capabilities, an integrated mouse shall be provided. The type of mouse provided shall be described such as Trackball, Touch pad, and Joystick.

9.3.13 Display Specifications

The screen shall be designed for reliable operation in the mobile environment.

9.3.13.1 Brightness Control

A brightness and contrast control shall be easily accessible to the operator.

9.3.13.2 Colors

The total number of colors supported by the display shall be provided.

9.3.13.3 Viewing Area

The diagonal screen width shall be stated in inches, with a minimum of 12 inches.

9.3.13.4 Viewing Angle

The maximum viewing angles shall be described in degrees.

9.3.13.5 Screen Area

The number of pixels shall be stated for both the X and Y-axis.

9.3.13.6 Screen Readability

The display unit shall be easily readable in direct sunlight. The display shall be designed in such a way that the effects of reflected light during day or night operation, including keyboard illumination, will not preclude normal viewing and use. The screen must also be visible in conditions of no-external light source. The actual NIT (cd/m2) rating shall be provided.

9.3.14 Docking Apparatus

If a docking station shall be provided it shall be designed to withstand docking iterations in excess of 25,000. The actual number shall be provided.

9.3.15 Drop Resistance

4 feet to non-yielding surface without loss of data while operational.

9.3.16 Electromagnetic Interference (EMI)

EMI levels shall not interfere with the existing radio communication or other equipment in the vehicles.

9.3.17 Existing Equipment

If practical and economically sound, the mounts shall be designed to take advantage as much as reasonably possible the existing installation.

9.3.18 Floppy Drive

3.5" removable disk drive shall be offered as an option.

9.3.19 Hard Disk Drive

The internal disk drive shall be documented in GB, it is anticipated that a minimum of 20 GB will be required, however the Offeror is responsible for determining the minimum necessary based upon the application requirements.

9.3.20 Housing Material

The housing material of passenger compartment components shall be such to prevent deformation or warping when subjected to repeated exposure to direct summer sunlight inside vehicles with the windows rolled up. The ability to withstand temperature extremes is a particular concern based upon the local weather conditions. Any design efforts to increase the systems life span shall be documented.

9.3.21 Humidity

The unit shall be designed to operate in a wide range of humidity. The Offeror shall document the upper and lower extremes for the unit as Offered in percentage of relative humidity.

9.3.22 Industry Experience

The manufacturer of the components must be a reputable company with a minimum of five (5) years of experience.

9.3.23 Keyboard

The keyboard shall be 76-key full QWERTY, which is designed for reliable operation in the mobile environment. The keyboard assembly must employ keys that, give the operator a sense of a solid touch when pressed, employs sculptured keys, and full key travel. All keystroke combinations or unique keys available on the CAD system keyboards must be supported from this unit.

9.3.24 Keyboard Illumination

Illumination of the keyboard for night operation shall be provided. This control shall include the ability to adjust the intensity from a visible level to an off or invisible level. This is to prevent illuminating users at night. A backlit keyboard is the preferred method, however other alternatives will be considered. A description of the ability to control the lighting and the methodology employed shall be described.

9.3.25 Main Processor

Intel-based i86 Pentium Architecture.

9.3.26 Mean Time Between Failures (MTBF)

All units provided shall have a published MTBF.

9.3.27 Memory

The memory shall be provided in MB installed with support for additional memory defined.

9.3.28 Mounting Location

The computer must be elevated above the floor of the vehicle in between the seats for sedan type vehicles. In the case of a truck, the unit must be mounted such that it can be operated by the appropriate staff. The offering shall clearly describe the recommended mounting position and its associated cost for each type of vehicle.

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9.3.29 Mounting Strategy

Access to any components that would be serviced while in the vehicle must be considered in the mounting strategy. An example is if a fuse is located on the back of a device, the optimum mounting position would allow for access to the fuse without removing the device.

9.3.30 Ongoing Support

The manufacturer of the components must provide, and have a parts support system, capable of providing parts for a period of five (5) years. This will be measured from the date of system acceptance.

9.3.31 Upper Operating Temperature

The unit shall be designed to operate in a wide range of temperatures, typical of the southwest environment. The Offeror shall document the upper extreme supported by the unit as Offered in degrees Fahrenheit.

9.3.32 Lower Operating Temperature

The unit shall be designed to operate in a wide range of temperatures. The Offeror shall document the lower extreme supported by the unit as Offered in degrees Fahrenheit.

9.3.33 PCMCIA Ports

The number of Type II PCMCIA slots available for future devices shall be documented.

9.3.34 Performance

All computers shall be offered in such a configuration that the computer does not act as a significant bottleneck in the process. The memory, processor speed, and any other relevant parameters shall be selected with the intended application in mind and have enough additional performance to be able to operate through several revisions of the application.

9.3.35 Power Issues

The power system shall be designed so that voltage variations and electrical noise in a normal vehicle electrical system will not cause problems. The unit shall not lose or alter stored or displayed information while operating on the vehicle battery or during the switch between the vehicle battery and the computer battery.

9.3.36 Power Requirements

The voltage and amperage requirements shall be provided for normal operation, start-up and any other condition, which is outside the range of these values. It shall be expressed in volts, tolerance level and amps.

9.3.37 Power Switch

Both the computer and the docking station shall include an ON/OFF switch. The switch will be designed such that it prevents accidental turn off a designed such that it can be located in low light conditions by an operator wearing gloves.

9.3.38 Previous Installs

The Offeror shall include at least two (2) photographs and/or illustrations of vehicle installations in typical police vehicles.

9.3.39 Radio Modem

The unit shall support no less than two modems.

9.3.40 Removable Computers

For computers that are provided with a docking apparatus the removable of the computer should not involve the connecting or disconnecting any cables to remove the unit.

9.3.41 Repetitive Shock

The Offeror shall describe the unit's resistance to shock encountered because of being dropped or while operating in the vehicular environment.

9.3.42 Repetitive Vibration

The Offeror shall describe the unit's resistance to vibration while operating in the vehicular environment.

9.3.43 Serialization

All computers supplied shall have a unique serial number for asset management.

9.3.44 Serial Ports

The number of serial ports available for future devices shall be documented.

9.3.45 Shock Mounting

Components shall be "Shock Mounted" or otherwise stabilized in order to reduce the effects of shock and vibration created in a mobile environment.

9.3.46 Speaker

The unit shall have audible alert capability with adjustable volume level.

9.3.47 Spill Resistance

The keyboard shall be protected against direct spills of liquids including liquids containing sugars. The methodology employed to prevent liquid intrusion shall be described

9.3.48 Upper Storage Temperature

The unit shall be designed to be stored in a wide range of temperatures as found in the region. The Offeror shall both document the upper extreme for the unit as Offered in degrees Fahrenheit and describe what assurances the Offeror can provide that this value will be sufficient for the intended application.

9.3.49 Lower Storage Temperature

The unit shall be designed to be stored in a wide range of temperatures as found in the region. The Offeror shall both document the lower extreme for the unit as Offered in degrees Fahrenheit and describe what assurances the Offeror can provide that this value will be sufficient for the intended application.

9.3.50 Stowed Position

All equipment shall support a stowed position. When the equipment is properly stowed, the equipment shall not become a projectile in the case of a crash. The stowed position shall not preclude the ability to receive and respond to CAD dispatch communications.

9.3.51 Theft Prevention

If a docking station is Offered, it shall have the ability to physically lock the computer in the vehicle and require a key to remove the unit.

9.3.52 Touch Screen

The screen is preferred to be operable by a gloved hand. The technology such as Resistive, Capacitive, Projected capacitive, Infrared, Surface acoustic, and Guided acoustic employed shall be described.

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9.3.53 USB Port

The number of USB ports available for future devices shall be documented.

9.4 Three Piece – Vehicular Hardware

This is one of the three styles of vehicular computers that are desired. The Offeror must determine the appropriate quantity of these platforms to be provided based upon taking the number necessary to perform the load testing of the system and dividing it by three. In other words if twelve computers are necessary to perform the load test the Offeror shall provide four (4) of this style computer as part of the deliverables following the notice to proceed. The State will then evaluate the units for a period of time. If one or more models is determined to be acceptable for operation, the desired quantities of the acceptable model(s) will then be ordered.

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9.4.1 Distinguishing Information

The manufacture name, model number (including any optional components model and part numbers which are Offered), computers name a well as photos showing the system from each angle shall be included. All specifications are for the computer as a standalone unit unless specifically stated that the feature is not resident in the computer.

9.4.2 A/C Adapter

A 120 VAC adapter shall be Offered as an option for portable computers.

9.4.3 Air Bag Deployment

All vehicular installations shall be such that they do not interfere with the driver side air bag deployment when stowed. If intrusion into the passenger side, air bag deployment area, specific notation must be made. In some vehicles, interference with the air bag may not be an acceptable configuration.

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9.4.4 Airborne Contaminates

Performance shall not be degraded in the presence of dust, smoke, or moisture.

9.4.5 Auto Power Sensing

The CPU, display, and keyboard shall use the internal battery to allow for graceful shutdown upon loss of vehicle power.

9.4.6 Battery Life

Shall be documented in minutes of continuous unpowered operation.

9.4.7 Battery Type

Shall document the chemical composition of the type of rechargeable battery offered, such as Nickel-Cadmium, Nickel-Metal-Hydride, Lithium Ion, etc.

9.4.8 Bracket Selection

The external edges and corners of passenger compartment components must be rounded and shall be padded where practical. The mounting bracket shall permit horizontal swivel and tilt adjustments. It shall be mounted, wherever possible, in such a way to provide viewing convenience and keyboard operation by either the passenger or driver. All swivel mounts shall have a positive means of locking them in the desired position to prevent shifting while the vehicle is in motion.

9.4.9 Carrying Handle

If the unit is portable, a sturdy carrying handle shall be provided on the computer housing.

9.4.10 CD ROM Drive

If offered, it shall be included as an option.

9.4.11 Clock Speed

The processor speed shall be provided in MHz. If a coprocessor or other methodologies to improve performance are utilized, they shall be described in full.

9.4.12 Cursor Control

Beyond the touch screen capabilities, an integrated mouse shall be provided. The type of mouse provided shall be described such as Trackball, Touch pad, and Joystick.

9.4.13 Display Specifications

The screen shall be designed for reliable operation in the mobile environment.

9.4.13.1 Brightness Control

A brightness and contrast control shall be easily accessible to the operator.

9.4.13.2 Colors

The total number of colors supported by the display shall be provided.

9.4.13.3 Viewing Area

The diagonal screen width shall be stated in inches, with a minimum of 12 inches.

9.4.13.4 Viewing Angle

The maximum viewing angles shall be described in degrees.

9.4.13.5 Screen Area

The number of pixels shall be stated for both the X and Y-axis.

9.4.13.6 Screen Readability

The display unit shall be easily readable in direct sunlight. The display shall be designed in such a way that the effects of reflected light during day or night operation, including keyboard illumination, will not preclude normal viewing and use. The screen must also be visible in conditions of no-external light source. The actual NIT (cd/m2) rating shall be provided.

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If a docking station shall be provided it shall be designed to withstand docking iterations in excess of 25,000. The actual number shall be provided.

9.4.15 Drop Resistance

4 feet to non-yielding surface without loss of data while operational.

9.4.16 Electromagnetic Interference (EMI)

EMI levels shall not interfere with the existing radio communication or other equipment in the vehicles.

9.4.17 Existing Equipment

If practical and economically sound, the mounts shall be designed to take advantage as much as reasonably possible the existing installation.

9.4.18 Floppy Drive

3.5" removable disk drive shall be offered as an option.

9.4.19 Hard Disk Drive

The internal disk drive shall be documented in GB, it is anticipated that a minimum of 20 GB will be required, however the Offeror is responsible for determining the minimum necessary based upon the application requirements.

9.4.20 Housing Material

The housing material of passenger compartment components shall be such to prevent deformation or warping when subjected to repeated exposure to direct summer sunlight inside vehicles with the windows rolled up. The ability to withstand temperature extremes is a particular concern based upon the local weather conditions. Any design efforts to increase the systems life span shall be documented.

9.4.21 Humidity

The unit shall be designed to operate in a wide range of humidity. The Offeror shall document the upper and lower extremes for the unit as Offered in percentage of relative humidity.

9.4.22 Industry Experience

The manufacturer of the components must be a reputable company with a minimum of five (5) years of experience.

9.4.23 Keyboard

The keyboard shall be 76-key full QWERTY, which is designed for reliable operation in the mobile environment. The keyboard assembly must employ keys that, give the operator a sense of a solid touch when pressed, employs sculptured keys, and full key travel. All keystroke combinations or unique keys available on the CAD system keyboards must be supported from this unit.

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Illumination of the keyboard for night operation shall be provided. This control shall include the ability to adjust the intensity from a visible level to an off or invisible level. This is to prevent illuminating users at night. A backlit keyboard is the preferred

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method, however other alternatives will be considered. A description of the ability to control the lighting and the methodology employed shall be described.

9.4.25 Main Processor

Intel-based i86 Pentium Architecture.

9.4.26 Mean Time Between Failures (MTBF)

All units provided shall have a published MTBF.

9.4.27 Memory

The memory shall be provided in MB installed with support for additional memory defined.

9.4.28 Mounting Location

The computer must be elevated above the floor of the vehicle in between the seats for sedan type vehicles. In the case of a truck, the unit must be mounted such that it can be operated by the appropriate staff. The offering shall clearly describe the recommended mounting position and its associated cost for each type of vehicle.

9.4.29 Mounting Strategy

Access to any components that would be serviced while in the vehicle must be considered in the mounting strategy. An example is if a fuse is located on the back of a device, the optimum mounting position would allow for access to the fuse without removing the device.

9.4.30 Ongoing Support

The manufacturer of the components must provide, and have a parts support system, capable of providing parts for a period of five (5) years. This will be measured from the date of system acceptance.

9.4.31 Upper Operating Temperature

The unit shall be designed to operate in a wide range of temperatures, typical of the southwest environment. The Offeror shall document the upper extreme supported by the unit as Offered in degrees Fahrenheit.

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9.4.32 Lower Operating Temperature

The unit shall be designed to operate in a wide range of temperatures. The Offeror shall document the lower extreme supported by the unit as Offered in degrees Fahrenheit.

9.4.33 PCMCIA Ports

The number of Type II PCMCIA slots available for future devices shall be documented.

9.4.34 Performance

All computers shall be offered in such a configuration that the computer does not act as a significant bottleneck in the process. The memory, processor speed, and any other relevant parameters shall be selected with the intended application in mind and have enough additional performance to be able to operate through several revisions of the application.

9.4.35 Power Issues

The power system shall be designed so that voltage variations and electrical noise in a normal vehicle electrical system will not cause problems. The unit shall not lose or alter stored or displayed information while operating on the vehicle battery or during the switch between the vehicle battery and the computer battery.

9.4.36 Power Requirements

The voltage and amperage requirements shall be provided for normal operation, start-up and any other condition, which is outside the range of these values. It shall be expressed in volts, tolerance level and amps.

9.4.37 Power Switch

Both the computer and the docking station shall include an ON/OFF switch. The switch will be designed such that it prevents accidental turn off a designed such that it can be located in low light conditions by an operator wearing gloves.

9.4.38 Previous Installs

The Offeror shall include at least two (2) photographs and/or illustrations of vehicle installations in typical police vehicles.

9.4.39 Radio Modem

The unit shall support no less than two modems.

9.4.40 Removable Computers

For computers that are provided with a docking apparatus the removable of the computer should not involve the connecting or disconnecting any cables to remove the unit.

9.4.41 Repetitive Shock

The Offeror shall describe the unit's resistance to shock encountered because of being dropped or while operating in the vehicular environment.

9.4.42 Repetitive Vibration

The Offeror shall describe the unit's resistance to vibration while operating in the vehicular environment.

9.4.43 Serialization

All computers supplied shall have a unique serial number for asset management.

9.4.44 Serial Ports

The number of serial ports available for future devices shall be documented.

9.4.45 Shock Mounting

Components shall be "Shock Mounted" or otherwise stabilized in order to reduce the effects of shock and vibration created in a mobile environment.

9.4.46 Speaker

The unit shall have audible alert capability with adjustable volume level.

9.4.47 Spill Resistance

The keyboard shall be protected against direct spills of liquids including liquids containing sugars. The methodology employed to prevent liquid intrusion shall be described

9.4.48 Upper Storage Temperature

The unit shall be designed to be stored in a wide range of temperatures as found in the region. The Offeror shall both document the upper extreme for the unit as Offered in degrees Fahrenheit and describe what assurances the Offeror can provide that this value will be sufficient for the intended application.

9.4.49 Lower Storage Temperature

The unit shall be designed to be stored in a wide range of temperatures as found in the region. The Offeror shall both document the lower extreme for the unit as Offered in degrees Fahrenheit and describe what assurances the Offeror can provide that this value will be sufficient for the intended application.

9.4.50 Stowed Position

All equipment shall support a stowed position. When the equipment is properly stowed, the equipment shall not become a projectile in the case of a crash. The stowed position shall not preclude the ability to receive and respond to CAD dispatch communications.

9.4.51 Theft Prevention

If a docking station is Offered, it shall have the ability to physically lock the computer in the vehicle and require a key to remove the unit.

9.4.52 Touch Screen

The screen is preferred to be operable by a gloved hand. The technology such as Resistive, Capacitive, Projected capacitive, Infrared, Surface acoustic, and Guided acoustic employed shall be described.

9.4.53 USB Port

The number of USB ports available for future devices shall be documented.

9.5 Vehicular Applications

The application shall be designed with the end user environment and field conditions taken into account as well as providing an easy to use product that is intuitive for a law enforcement user. This is a section where screen samples would be very beneficial for the evaluation member to understand how the functionality is accomplished.

9.5.1 Application Compatibility

The selected application shall be designed that it does not interfere with the use of Microsoft Office applications running concurrently with the application. Any known conflicts shall be described.

9.5.2 Application Customization

The application software shall be customizable without the customization process precluding the unit from being upgraded to future software versions.

9.5.3 Application Level Encryption

No specific hardware components or end user intervention shall be required to facilitate the data encryption.

9.5.4 Background Operation

The application shall run continuously even when operating other applications in order to facilitate real time wireless data network monitoring. The application shall be able to be selected by a function key/pointing device when operating in any other mode. The application should also support the ability to "push" itself into the foreground when a message that has been configured to do so is received.

9.5.5 Data Entry

Pick lists, short cuts, and default data options shall be administrator configurable and easy to use. Options such as the state being defaulted for a driver license inquiry and entering commands like "d" for auto-population of date fields shall be options. The Offeror shall clearly state where these types of options exist and how they are initially configured and maintained after initial implementation.

9.5.5.1 Frequently Used Keys

Similar and frequently used function keys shall be common across different applications or modules.

9.5.5.2 Form Retrieval

The user interface shall support the ability for the operator to retrieve stored forms via function keys for all applicable functions.

9.5.5.3 Moving Data

Each functional module shall share applicable data with all other applications or modules therein.

9.5.5.4 Movement between Fields

Form field selection shall be supported via pointing device and other cursor movement keys such as the ability to "Tab" between fields and have fixed data length fields move cursor to next field upon entry of data.

9.5.5.5 Pick Lists

All form fields for which pre-defined values are available shall provide drop down pick lists. All drop-down lists shall allow for pre-defined (default) value selection and entry into the form field using a pointing device and other cursor movement keys.

9.5.5.6 User Interface

A common user interface methodology shall be supported by the specified solution. Each functional module shall have, to the greatest extent possible, the same look and feel as the other functional modules provided.

9.5.5.7 Unit Status

The display shall show the units status as reported to the CAD.

9.5.6 Delivery Notification

All transactions shall support the ability to confirm status of the delivery of the data being sent. It is anticipated that different transactions shall have different methods for displaying this notification. Each transaction shall include a description of how the user will be aware of the delivery status. If a transaction does not provide this functionality, it shall be noted.

9.5.7 Functions

All functions shall be accessible via a variety of methods including function keys, keystroke combinations (alt-Key, Ctrl-key, etc.), and where applicable via a touch screen. Except where specifically noted otherwise, the term "function key" shall include physical keyboard keys or soft keys provided by display icons that can be selected via the pointing device, touch screen, or keyboard key.

9.5.8 Help Functions

In addition to the standard Microsoft help applications resident on the computer, each application module provided, shall have a help function provided. It shall be designed to assist in eliminating common user problems and thoroughly explain the module it is capacities within the application. Simply referring to an operating system help routine will not be sufficient.

9.5.9 Logon

The application shall offer a single logon and password for all functions described. The typical logon process shall be described in detail. It is the intention that the field users will not have to logon multiple times.

9.5.10 Multi User Vehicles

The ability to support multiple users in a single vehicle with a single computer should be discussed. The recommend strategy for ensuring that all audit trails accurately reflect the operations performed by any given operator shall be discussed in detail.

9.5.11 Night Operation

The application shall be designed to operate in a reduced light condition that allows information to be readable but does not illuminate the user or the vehicle. Color combinations that preserve night vision are preferred while operating in this mode.

9.5.12 Operating System

The application shall be compatible with current Microsoft Windows operating system software. The Offeror shall discuss what version of Microsoft Windows are supported and plans for future support.

9.5.13 Text Size

All text displayed and input on user screens shall be of a nature that is conducive to performing the function in a vehicular environment. Excessively small fonts or hard to read fonts are not acceptable.

9.5.14 Use of Color

Use of color to highlight or differentiate important information is desired. Color combinations shall be administratively configurable to allow viewing in the conditions common in the vehicular environment. This includes combinations that are suited to use in bright sun light and in the dark.

9.5.15 Unable to Parse Data

In the event that a form is not able to parse data it has received, it shall send a notification to the message switch indicating the form, the inquiry, and the data that was deemed unreadable. The unparsed data shall be displayed to the user with an indication of the parsing failure.

9.6 Remote Subscriber Management

The general intent of these options is to ensure that, as few reasons as possible, exist to have to service the field unit. Any other offerings that reduce or eliminate this need shall be discussed in detail.

9.6.1 Pick List and Defaults

All pick lists and application defaults contained on the unit shall support being updated from a remote source (preferably the existing mainframe) either upon a logon sequence or based upon a notification sent to the user.

9.6.2 Software Updates

The Offeror shall describe the extent to which the application shall support being updated from a remote location.

9.6.3 User Defined Configuration

Any user-defined configuration that is only stored resident to the computer shall have an option to back up the data either to a removable media or via the wireless network to a server.

9.7 Features

It is anticipated that the ability to limit access to each of the major subsystems defined herein will be available on a user-by-user basis. It is desired that one application vendor accomplishes all the functions defined in this section of the RFP, allows, and disallows functions based upon the individual user needs. Adherence to this methodology and types of levels of enabling/disabling of features and functions shall be clearly stated.

9.7.1 CAD Access

9.7.1.1 Call Receipt

All authorized users shall have a display screen that either formats the CAD call information into a logical form, or mirrors the information as it is displayed on the CAD screens.

9.7.1.2 CAD Call Inquiry

Beyond being able, to receive call information, users shall be able to inquire about information contained in the CAD. Either this display shall be a mirror of the CAD screen or a logically organized form for the field user. All screens associated with call shall be available.

9.7.1.3 CAD Status Entry

All authorized users shall have the ability to update the unit status from the field via a function key or a function-key and additional information input for status inputs that require additional information. Integration with AVL for location information shall be provided. All status entries supported by the CAD shall be available from the field. If multiple methods of entry are required to support all the types, the most common will be provided via the easiest method.

9.7.1.4 Status Inquiry

All authorized users shall have access to inquire about the status of other units on the system as reported on the CAD.

9.7.1.5 Text Messaging

Field users shall have the ability to send short text messages to other field users, CAD operators, or groups containing either or all of the above. The description of this service must include the maximum length of these messages. If it is determine to be different from text messaging, the users will also be able to generate broadcast messages to all or subsets of predefined users. Message shall be displayed in the order received unless a priority system is available.

All text messaging between all MDCS users and the dispatch facilities shall be logged and retained consistent with agency audit policies. These text message log files shall be accessible to authorized agency personnel for law enforcement audit purposes.

9.7.2 State & Federal Database Access

All authorized users shall be able to access the State and Federal systems to perform inquired based upon selection a simple form configured for each type of inquiry.

9.7.2.1 Inquiry

The form would ensure the correct data formatting is followed wherever possible. The extent and types of local data validation will be described in detail.

9.7.2.2 Inquiry Response

In the case of a hit indication, a notification shall minimally be sent to the units' Supervisor and the Dispatcher positions. Other notification capabilities such as notification of other members in work area shall be discussed. The discussion should clearly state how it is configured and maintained.

9.7.2.3 Hit Notification Suppression

For inquires that utilize the hit response, an option shall be available to the originator to suppress the notification process. This field shall default to off and only be activated by the user specifically selecting the deactivation feature. Selecting of the feature will result in only that inquiry from being suppressed. If additional inquires are initiated the disability would need to reselected if it was desired.

9.7.3 Emergency Messages

The Offeror shall describe what information is contained in an emergency message.

9.7.3.1 Defined Recipients

The Offeror shall describe how the recipients of the notification are defined and maintained in a live system.

9.7.3.2 Generation

All field users shall be able to generate an emergency message via either a single key or a simple keystroke combination. If functionality is provided in a single keystroke, the key selected shall be clearly differentiated and protected from accidental activation.

All emergency messages shall be logged and retained consistent with agency audit policies. These log files shall be accessible to authorized agency personnel for law enforcement audit purposes.

9.7.3.3 Receipt

If a user receives an emergency message from another user, it shall be displayed in the foreground immediately and the alert tone will be sounded until specific action is taken.

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9.7.4 Text to Voice

The Offeror shall discuss as an option, the ability to add a text to voice feature for selected transactions. It is anticipated that the option shall support the user controlling the reading of the message on a case-by-case basis. This is to prevent messages from being read when the message maybe of a sensitive nature or when unauthorized individuals are present.

9.7.5 Form Features

Screen snap shots of a recent implementation would be helpful in base lining the application. It is understood that many application allow for extensive modification and that the final product may look strikingly different. However, any information that can help the reader understand the references made in the response is greatly appreciated. The State understands that the actual layout, look, and feel of the forms will be decided as part of a detailed design effort.

9.7.5.1 Audible Alerts

All audible alerts shall allow for unique configurable sounds for each functional module and type of alert.

9.7.5.2 Current Time

The application will be designed such that either the time will be displayed and variable in the windows tool bar, or if that is not present, somewhere else on the screens such that the user does not need to search to find it based upon the screen.

9.7.5.3 Message View/Delete

All messages sent and received shall be individually viewable and then saved or deleted on an individual basis. All messages regardless of type shall be able to be deleted as a group. A group being defined as all messages or some subset of the messages stored on the unit.

9.7.5.4 Message Waiting Indication

All messages received shall be visually displayed to the operator via window display or some form of icon. All visual indications shall include a counter showing the number of messages that have not been viewed (in queue counter.) Message receipt shall be associated with an audible indication, which is sounded upon receipt of each message.

9.7.5.5 Time Stamp

All messages shall have a method where the operator can determine the time and date associated with message reception or transmission.

9.7.5.6 Transmission Status

Success and failure of all transmitted messages shall be visually displayed to the operator. Success or failure of all transmitted messages shall be audibly indicated to the operator.

9.8 Capacity

9.8.1 RF Bandwidth Sensitivity

All data utilizing forms shall support transmitting the data entered without the need to transmit the form. Other methods to conserve the RF bandwidth shall be discussed.

9.8.2 Multiple RF Interfaces

For CDPD or 802.11

The application shall be designed to support connectivity via a minimum of two RF modems. It is not intended that the application would use multiple networks or modems simultaneously, rather that the application is suited to switching between two modems easily.

9.8.3 Wired Access

The application shall be designed to support connectivity via a wired Ethernet connection. This will allow the same software to run on a computer in-house as in the field. This connectivity option does not need to support both RF type and in-house (hard-wired) connections simultaneously. Rather it is the intention to be able to move portable computers from the vehicle to a wired LAN or run copies of the application on a wired terminal.

9.9 User File Maintenance

The application shall be designed to be largely self-maintaining. Regular user intervention to remove temporary files or log files shall not be required. Periodic user maintenance requirements shall be discussed.

9.10 Security

9.10.1 Application Access

The application shall be designed to prevent unauthorized access. Access to the application shall require authentication of a logon and password.

9.10.2 Access Restrictions

The password security and operator access limitations of the user interface shall comply with the requirements of the CAD systems where applicable.

9.10.3 Timed Screen Lock

After an administrator-defined timeout, the units shall lockout the screen (blank out, or display a screen saver) and require the user to enter their password to regain access to the unit. This can be accomplished by either the OS or the application. The Offeror shall clearly delineate the lockout offered and by which method it is accomplished.

9.10.4 Operator Initiated Screen Lockout

Activation of the lockout shall be supported via simple key/keystroke sequence.

9.10.5 Application Logout

The Offeror shall clearly describe the form and process a user must follow to logoff. This process shall be simple and intuitive.

9.10.6 Information Retention

Local retention of any user data after logout, other than basic configuration, shall not be supported. All user inquiry log files, completed and uncompleted reports shall not be stored on the computer. This is intended to reduce the security concern if a computer is lost or stolen. Any retention of information other than basic configuration shall be stored on a central server if it requires archiving.

9.10.7 Storage Encryption

The ability to have the data stored on the local computer encrypted to prevent unauthorized access is desirable. This capability will be discussed as part of the Offer.

9.11 Certification of Basic Operation

Once the vehicular hardware is fully installed and the application is at least minimally configured a certification of operation procedure shall be performed. This "birth certificate" process is intended to assist in ensuring that clear and reproducible steps are followed in the installation of all equipment. This will be a test to ensure that all mobile units are operational. The suggested extent of the testing the Offer anticipates performing shall be provided for review.

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10. SYSTEM INTERFACES

A paragraph-by-paragraph response shall be provided indicating compliance with the described requirements, specifications and functions for this section of the RFP. If the Offeror takes exception to a specific paragraph, they shall fully describe their exception in the appropriate section of the proposal.

The system provided will allow a network interface between remotely located system processors and data storage hardware. The CAD intra-site communications will be through Offeror-provided and installed cabling between the equipment room and the dispatch room at each of the communications centers.

10.1 Alphanumeric Paging

A. The Offered CAD system must support DTMF paging.
B. The Offered CAD system must provide a searchable list of people with pagers.
C. The Offered CAD system must provide a means of selecting one or more users off the list of people with pagers and to automatically send a page to the selected pagers.
D. User must be able to select a group of individuals and/or all individuals within one or more predefined groups off the list of people with pagers and to automatically send a page to the selected pagers.
E. The Offered CAD system must allow Dispatchers and Call Takers to enter alphanumeric messages to be sent to the selected pagers.
F. The Offered CAD system must be able to send pages with associated messages to one or a group of pagers.
G. It is desirable that certain incident codes automatically generate pages with pre-canned or user specified alphanumeric messages. The automatically selected pagers should be geographically sensitive (e.g., a geographically specific set of pagers will be paged based on the incident's location).

10.2 Arizona Criminal Justice Information System (ACJIS)

The Offered CAD system must provide both emulation and seamless access to the ACJIS network through its workstations. Seamless access describes the limited number of queries to ACJIS/NLETS/NCIC that occur automatically when certain data fields are populated in the CAD system (i.e., names, license plates, VIN, etc.). Emulation typically occurs in a dedicated window, which provides all if not most of the ACJIS/NCIC/NLETS functions by emulating the standard method for accessing ACJIS.

A. The CAD system must contain fill-in-the-blank type data entry forms for frequently used ACJIS/NCIC queries (e.g., Drivers License, Person, Vehicle Tag, etc.).
B. The CAD system must generate ACJIS/NCIC queries from a command line. Users access this function by entering a valid command followed by the appropriate values. This functionality must be provided for a select number of frequently used ACJIS/NCIC queries.

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C. The CAD system must be able to emulate an ACJIS/NCIC terminal that supports all authorized ACJIS/NCIC functions.

D. The CAD system must be able to generate automatic queries to ACJIS/NCIC for selected data entry fields (e.g., vehicle tag check on a traffic stop).

E. The CAD workstation running an ACJIS/NCIC query must be able to continue other CAD system functions while the query is being processed. The workstation must not be locked up until the query response returns from ACJIS/NCIC.

The following security standards are required for terminals/workstations accessing the ACJIS network.

A. Physical security – adequate security needs to be provided to protect against any unauthorized viewing or access to computer terminals, access devices, or stored/printed data at all times.

B. Originating Agency Identifiers (ORIs) are required for each FBI ACJIS transaction. The ORIs identify the agency of origin. Transaction logging must identify the queries and users originating them.

C. In addition to the ORI, a unique identifier (user ID, access device pneumonic, IP address, etc.) must accompany each FBI ACJIS transaction to identify the person initiating the transaction.

D. At least a 128-bit encryption is required for any applications accessing ACJIS through a public LAN/WAN (e.g., frame relay, ATM, common carrier, etc.).

E. Consistent with existing State and Federal regulations and agreements, any systems that access criminal justice files must maintain a log of all transactions. Offerors will specifically discuss how their Offered systems will maintain the required logging of inquiry transactions to the criminal justice files of ACJIS/NCIC and those available from other states via NLETS.

F. Firewalls are required to protect against access from the Internet.

G. Offerors will indicate what controls exist within their Offered system to prevent criminal justice information from being accessed by terminals or workstations other than those that are authorized and under the operation of authorized users.

10.3 Optional Automatic Vehicle Location (AVL) Interface

The CAD system should be able to accept and display automatic vehicle location (AVL) information provided by the optional AVL system.

A. The CAD system must be able to provide real-time display of Vehicle locations on the associated Tactical Map Display.

B. The CAD system must be able to interact with the AVL system to establish system parameters such as frequency of location transmittal by AVL equipped vehicles.

C. The Offered CAD system must be able to convert Latitude and Longitude data provided by the AVL system for accurate display on the CAD system's associated tactical map display.

D. The Offered CAD system must be able to accept and use AVL information for unit recommendations.
E. The Offered CAD system must be able to accept and utilize vehicle information such as unit ID for spatial display and for dispatch purposes.
F. Vendors responding to this RFP must fully explain their AVL interface capabilities.

10.4 CAD to RMS Interface

DPS does not currently have a records management system. Initially, it will not be necessary for the Offered CAD system to transfer skeleton incident information to, or query an RMS system. However, DPS is migrating to a NIBRS based reporting system and desires to have the CAD system interface with the NIBRS based RMS in the future.

A. Costs for this interface should be a separately priced item.
B. The Offered CAD system must be able to transfer completed incident information to a NIBRS compliant RMS system.
C. The Offered CAD system must be able to query RMS want and warrant files.
D. The system must support master file queries into the RMS databases as required.

10.5 Caller ID

A. The State desires that the Offered CAD system be interfaced with the telephone system's Caller ID system.
B. The Offered CAD system must provide the capability of moving the Caller ID information to the appropriate fields in the CAD system's incident entry screen by using only one keystroke or mouse click.

10.6 E9-1-1 Telephone Systems

The Department of Public Safety is a secondary PSAP (Public Safety Answering Point). Calls are routed from primary PSAPs to DPS dispatch centers as required. The E9-1-1 controllers at each facility are capable of receiving and displaying transferred E9-1-1 calls. MAARS E-9-1-1 controllers are located at each center and are interfaced to each center's Vesta Phone system. A CAD port is available on each controller. Offerors are required to interface the CAD system to the MAARS' E9-1-1 controller.

Ideally, the interface will provide redundancy by means of multiple connections to the E9-1-1 controller, each monitored continuously by the interface software. This capability should allow for uninterrupted processing of E9-1-1 calls in the event of a failure of one connection.

The CAD system must be:

A. Able to determine through the E9-1-1 interface which telecommunicator has a particular E9-1-1 call.

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B. The CAD system must automatically populate the CAD incident screen of the telecommunicator handling the call with the associated ANI/ALI information of that call.

C. Telecommunicators may accept or reject displayed information by a single function key entry or pointer device click.

D. If accepted, no further operator input will be necessary in order to load the ANI/ALI information into the CAD system's call entry screen.

E. Once the ANI/ALI information has been associated with the call's incident record, any other telecommunicator (Call Taker, Dispatcher, Supervisor) monitoring the call will also be able to view the call's ANI/ALI information.

F. The Offered CAD system must be able to receive and utilize Phase I data provided by the E-9-1-1 controller for locating wireless/mobile telephone E9-1-1 calls. Vendors shall include a description of their Offered system's capabilities for locating wireless/mobile telephone calls compatible with Phase I requirements.

G. The Offered CAD system must be able to receive and utilize Phase II data provided by the E-9-1-1 controller for locating wireless/mobile telephone E9-1-1 calls. Vendors shall include a description of their Offered system's capabilities for locating wireless/mobile telephone calls compatible with Phase II requirements.

H. The Offeror shall be responsible for ensuring that all required interface protocols (such as a "heartbeat" function between E9-1-1 and the CAD port) are operational prior to system cutover.

10.7 Geographic Information System (GIS)

DPS currently uses Environmental Systems Research Institute's (ESRI) ArcGIS 8.1 to maintain and enhance its geographic information system's databases and applications. In the future, ArcEditor (Arc/IMS) will be the main GIS tools used. The system operates on PC based workstations. The GIS data maintained and/or organized by DPS is available on the Department's Novell Server.

The Department maintains a street centerline and address file. Presently, the Database is maintained by a GIS Coordinator. Most of the GIS data stored in the database is derived from data submitted by State, local and regional agencies. Data submissions typically occur twice a year from participating agencies. However, updates may be provided on a monthly, quarterly, or annual basis. Since the schedule for submissions vary with each participating agency, updates can be submitted at any time. For high-priority, statewide projects, new GIS data is added on a daily basis.

The AZ Highway Patrol is responsible for U.S. and State Highways and freeways. However, the Criminal Investigations Division (CID) can go anywhere in the state to conduct its investigations and to operate its task forces. Therefore, the AZ Department of Public Safety can dispatch and monitor officers anywhere within the State of Arizona. The GIS database must cover the entire State.

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The coverage of the database currently maintained by the State must meet a minimum accuracy standard of 80%; meaning that at least eighty percent of the streets/features of an area must be accurately located and included in the database. However, depending on the origin of the data, the coverage/accuracy can range as high as 97%. DPS staff identifies errors or problem areas in the GIS data and reports them to the originating agency. The agencies then fix the data and re-submit the corrected data.

Arizona Department of Transportation (ADOT) is the primary data collector. The data provided by ADOT is of sub-meter accuracy. For the state's roads and highways, the GIS data provided by ADOT contains sufficient detail to display every lane on divided roads, on and off ramps and other detailed information.

The GIS data has the following characteristics:

- Typically generated via Global Positioning Satellite (GPS) systems
- Plus or minus 50 feet
- 92 percent complete in Metro Phoenix area
- 92 percent complete in Tucson
- 75 percent complete in the rest of the State

Data for the State's Indian Reservations is currently incomplete. However, DPS is in the process of filling in missing areas by using aerial photographs to capture the information.

The data is organized (tiled) as follows:

- Organized by County.
- Organized by City where appropriate.
- The data conforms to the NAD 83 standard.
- The entire database is 500 Megabytes.
- Speed limits are currently being added to the file.

Other GIS data and services available for use by vendors responding to this proposal include:

- ESRI/IMS (Internet Mapping Service) – provides the ability to push GIS data on to the Internet. ESRI/IMS provides browser access to GIS data published by DPS (e.g., crime trends, accident locations, etc.).
- Incident Management – E-team software. Large screen map display support for Emergency Operations Center.
- FHMA – Mile marker by mile marker video (still shots) organized in a graphic database. ADOT maintains the database. The database is 110 Gigabytes.

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Offerors must interface with the GIS database described above to construct the geo-file required for the Offered CAD system.

A. The system must be able to convert Latitude and longitude data to State Plane coordinates.
B. The system must be able to convert State Plane coordinates to Latitude and longitude coordinates.
C. The system must be able to load an initial data file provided from the GIS databases described above.
D. The system must support periodic loading of updated GIS system data files (street network, boundaries, etc.) that are maintained in the GIS database.

10.8 Local Network

The following shall apply to all network cabling provided by the Offeror.

10.8.1 Segmentation

The network must be segmentable using the deployed hardware; no new devices (bridges, routers, etc.) should be required to create new segments from existing segments, or to create new segments where none previously existed.

10.8.2 Ethernet Switching

Ethernet switching must be implementable as a future option. The network design and devices should be able to accommodate introduction of Ethernet switching hardware without requiring any device to be abandoned. Devices that require upgrades and any additional changes to device or topology must be defined and described, with appropriate drawings, in their entirety.

10.8.3 Host System Expansion

Host computer systems should have sufficient capability for additional memory, disk storage, and additional processors as will be required for the expected load increases placed on the system over its useful lifetime. Maximum capacities should be specified explicitly, and the associated ceilings in throughput should be thoroughly described.

10.8.4 Network Baseline

In order to determine if system throughput has fallen below prescribed levels, a system for measuring and reporting throughput data must be incorporated. A network baseline will be established as part of the acceptance test procedures, and daily monitoring of critical performance factors will be implemented thereafter.

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10.9 Mainframe Applications

The Offered CAD system must interface with the following Mainframe Applications:

A. Department Automated Report Tracking (DART) – The mainframe currently generates the next sequential department report number (e.g., DR#) to be used, through the DART system. This system is used statewide. All three dispatch centers access the same mainframe procedure to obtain the next department report number for officers to use in their reports. Department report numbers are also obtained outside the dispatch environment and these processes need to be considered when a new department report number is generated. The new Mobile Data Computer System will allow department report numbers to be generated directly out in the field without going through dispatch. For these and other reasons, DPS prefers to keep the department report number generation procedure on its mainframe. The Offered CAD system will have to interface with this process to obtain department report numbers. This process requires the CAD system sending skeleton incident data to the mainframe system before a department report number for an incident is returned to the CAD system. This skeleton information will have to be updated (retransferred to DART) if the incident is updated after the department report number is obtained. Other applications have successfully interfaced with the DR generation program via SNA LU6.2. However, MQSeries middle-ware, using the TCP/IP protocol is now the preferred interface method.

B. Terminal Emulation – 3270 terminal emulation capabilities will have to be provided in a separate set of windows on a subset of CAD workstations to allow OPCOMM personnel to continue to access mainframe applications such as DART, DLBI, HPBS, etc. See descriptions above in section 2.1.10 of the RFP. DPS is currently researching providing access to the 3270 applications through web-based browser technology. This technology, however, is still in research mode and vendors should not assume that it would be available within the time frame of this project.

C. Seamless Interface – the State desires to implement seamless access to some of these mainframe applications. The seamless interface would automatically query the database when data is entered into specific CAD data fields (e.g., VIN numbers, License Plate tags, names, etc.). Vendors are encouraged to describe any of these types of capabilities that their Offered system includes. However, they must be priced separately if any additional costs are involved.

D. User Pick-list maintenance – the State desires the option of continuing to maintain all tables associated with pick-list selections associated with the new system to be on the mainframe. The need to enter data into the mainframe and any new systems is undesirable from an on-going maintenance perspective. The Offeror shall describe how this desire can be accomplished. All aspects of integrating the new systems pick-lists to the mainframe system shall be priced separately.

10.10 Mobile Data Computer System

The Offered CAD systems must include an MDCS interface. The CAD system must support the following mobile computer dispatch capabilities:

A. Silent/digital dispatch – the ability to transmit incident information to assigned units through the Mobile Data Computer System without having to utilize voice (RF) communications.

B. Status updates – units in the field are able to directly update their status by activating icons/function keys without having to utilize voice (RF) communications.

C. Messaging – the CAD provides a mechanism for sending and receiving messages from mobile units. All messages are tracked (time stamped) and have the receiving and transmitting parties identified and recorded. All text messaging between all MDCS users and the dispatch facilities shall be logged and retained consistent with agency audit policies. These text message log files shall be accessible to authorized agency personnel for law enforcement audit purposes.

D. Self-initiated dispatch – a mobile-equipped unit happens upon an event and dispatches/assigns itself to the event. The unit informs CAD that it is responding to the event by sending CAD a digital message specifying the event location, nature code, and other relevant information. The CAD system treats the event as if it was entered into the system by a Call Taker or Dispatcher.

E. Support for remote CAD functions – authorized users are able to perform a subset of CAD functions on their mobile units. For example, Supervisors are able to query the CAD system to obtain information such as the status of one or more units, list of active calls, list of pending calls, etc. Units assigned to a call are able to query and update CAD by performing functions such as obtaining detailed call information, adding a comment/record to a call for service, retrieving location and status of all units assigned to the call, etc.

F. Units working a call can obtain the ID and status of other responding units and detailed information about the call.

G. Self-assignment to calls – ability for a unit to assign itself to a call without notifying dispatch over voice (RF) communications.

H. Notifications – ability of mobile units to digitally receive notification.

I. DR/Department report number determination – ability for mobile units to directly access the mainframe system to transfer skeleton incident data in order to obtain their DR/Case # through the CAD system's MDCS interface.

J. The Offered CAD system shall support Field Based Reporting (FBR), should such a system be implemented in the future. A complete description of the Field based Reporting system should be included especially highlighting the level of integration between the FBR application and the other functions required in this RFP such as the Dispatch and Inquiry capabilities.

10.11 Other CAD Systems

Incidents that occur on major roadways and freeways typically require a coordinated approach. Often times several agencies/jurisdictions need to respond. One of the stated goals of DPS is to be able to share critical incident information with adjoining jurisdiction's CAD systems. Fortunately, standards (e.g., APCO 36 and IEEE P1512.2000) are currently being developed for sharing incident information among responding agencies (for mutual aid, for multiple response scenarios, etc.). Unfortunately, however, these standards are still in the formulation stages. It is critical that the CAD system selected be compatible with these standards as soon as they are adopted.

The Offered CAD system must be compatible with APCO 36 and IEEE P1512.2000 standards as soon as they are adopted. Responses to this RFP must include a detailed description of the Offerer's plans for conforming to these standards and any costs associated with this interface/capability must be priced as a separate/optional line item.

Data Dispatch

10.12 Voice Radio System

A. The Offered CAD system must support emergency button activation by identifying the location and person/vehicle activating their emergency radio button. Ideally, the system would provide the radio ID, serial number, alias, and event code to the Dispatcher.

B. The Offered CAD system must provide support for emergency button activation by automatically sending a warning message within CAD to the Dispatcher controlling the unit that activated its emergency button, Supervisor and other personnel/positions as determined by DPS.

10.13 TDD

To accommodate hearing and/or speech impaired E9-1-1 callers, Offerors shall include a fully integrated TDD/CAD interface. The interface shall automatically open a TDD window at the receiving workstation upon receipt of the TDD's first Baudot tones or ASCII tones, and will visually and aurally indicate the presence of the TDD call.

A. The system must automatically open a TDD window at the receiving workstation upon receipt of the TDD's first Baudot tones or ASCII tones.

B. The system must visually and aurally indicate the presence of the TDD call.

C. The system must allow use of the CAD workstation keyboard for communication with the TDD sender.

D. The system must allow for pasting of text from the TDD window to the CAD Incident Entry Screen.

E. The system must provide a means of quickly toggling back and forth from the TDD window to the Incident Entry Screen.

F. The system must provide for full text storage and quick retrieval of the complete text of each TDD transmission.

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10.14 Time Synchronization Device

As a separate option, Offerors shall include a Time Synchronization Device equal to or better than a Spectracom Corporation "Netclock/2" utilizing WWVB radio signal or Global Positioning Satellite (GPS). The Offeror will specifically state the device, manufacturer, technology used, and interface capabilities of the device Offered.

10.14.1 CAD Timestamps

The Offered CAD system must be capable of interfacing to this Time Synchronization Device so that it will synchronize the CAD servers and workstations with the time provided by the Time Synchronization Device. This time will be used for the timestamps for all transactions within the CAD systems.

10.14.2 MDCS Timestamps

The Offered MDCS system must be capable of interfacing to this Time Synchronization Device so that it will synchronize each of the servers and network controllers and field user with the time provided by the Time Synchronization Device. This time will be used for the timestamps for all transactions within the MDCS systems.

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11. TRAINING REQUIREMENTS

Training on all system functions will be provided by the Offeror prior to commencement of the reliability test period. Training will include sufficient information and experience to familiarize system users, system administrators and maintenance personnel with system features and operations for their particular assignments. Training will include, at a minimum, hardware operation, operating system maintenance utilities, and application software features. All training, other than system administrator training, will take place within the Department of Public Safety, Arizona. In no case will ad-hoc or demonstration-only training be considered adequate to fulfill the training requirement for any operational level position.

All training will be performed using document-based training materials. Such documentation, at a minimum, will include hardware user manuals, software operational texts, and tutorial examples. Since the State intends to conduct all subsequent line-level training internally, it shall be necessary for the Offeror to grant the State permission to reproduce any and all training materials for purposes of training DPS personnel. To the extent possible, all such training materials should be made available to the State in camera-ready form, and, where possible, in electronic format. All operational tasks to properly operate and maintain the total system will be included in such training.

11.1 CAD and MDCS Training

Training tasks shall include, but not be limited to

Technical Training for support of MDC & RF

A. Applications software features.
B. Ad-hoc report generation and data query.
C. System parameter definition.
D. User definition and maintenance.
E. Security definition and management.
F. Backup creation and maintenance.
G. Installation and re-location of terminal devices.
H. Operation and maintenance of printing devices.
I. First level device troubleshooting.

The State will provide acceptable classroom space for training sessions. All instructional materials, media presentation devices, presentation media, and course instructors will be provided by the Offeror. Student to instructor ratios for any specific training session will be no greater than 12 to 1.

In addition to formalized training programs, the Offeror shall list any electronic utilities that provide an on-line or off-line training environment. The nature of such utilities shall be presented, along with the content of such courses. These utilities should simulate operational scenarios using live parametric data wherever possible.

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In addition to initial training for line level positions, the State will require the Offeror to provide a train-the-trainer level course for the officer training. The State recognizes the economy of such course methodologies; however, it is also recognized that few operational or supervisory level personnel have educational experience or backgrounds. Such train-the-trainer courses shall include a minimum of 16 hours of training on proper teaching methodology and practice to be used in a continuing education level environment, in addition to whatever training is needed for course fulfillment.

11.2 System Operations

Training in CAD and MDCS operations shall include all operating positions. Such positions shall include Call Takers, Dispatchers, dispatch Supervisors, system administrator, and report analyst. Common functions include system functionality, terminal setup, system login, electronic messaging, and security procedures. Specific minimum position level training includes:

A. Call Takers:
   1. Enhanced 9-1-1 ANI/ALI information display and input.
   2. Incident creation codes/procedures.
   3. Incident status display.
   4. Routing recommendation and override.
   5. Informational query.
   6. TDD display and operation.
   7. Position routing.
   8. Tactical map display.

B. Dispatchers:
   1. Incident status display and select.
   2. Unit status display, recommendation, and override.
   3. Status update.
   4. Informational query.
   5. TDD display and operation.
   6. Position routing.
   7. Tactical map display.

C. Dispatch Supervisors:
   1. All of the above Call Taker and Dispatcher functions.
   2. Operational parameter maintenance.
   3. Supervisor monitor and override functions.
   4. Failure mode recognition and corrections.

D. Report analyst:
   1. Database concepts.
   2. Report generation mechanisms.
   3. Geo-file/MSAG maintenance.

E. System administrator:

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1. Security concepts.
2. System features.
3. User definition and maintenance.
4. Monitor functions and reports.
5. Backup procedures.
6. Failure mode procedures.

F. Clerical staff:
1. Records creation and update functions.
2. Report generation.
3. Geo-file/MSAG maintenance.

G. Patrol Officer
1. Call Receipt and Status reporting.
2. Inquiry functions.
3. Messaging functions
4. Hazards file utilization.
5. Specific investigational maintenance functions.

H. Patrol Supervisor:
1. All Patrol Officer training.
2. Activity reporting functions.
3. Personnel scheduling functions.

11.3 Minimum Personnel Training Requirements

The Offeror shall provide for the following minimum numbers of personnel/position training requirements upon system implementation:

Personnel	Position Descriptions
40	CAD Dispatcher/Call Takers – Phoenix
25	CAD Dispatcher/Call Takers – Tucson
23	CAD Dispatcher/Call Takers – Flagstaff*
4	CAD Dispatcher Supervisors – Phoenix
4	CAD Dispatcher Supervisors – Tucson
3	CAD Dispatcher Supervisors – Flagstaff*
1	System administrators – Phoenix
20	Police Department Officers (Train the Trainer Course)
11	Police Department Supervisors

* *Separately Priced Option*

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11.4 Training Manuals, Handouts, and Equipment

The Offeror shall supply instructing personnel with training and experience on the equipment supplied under these specifications, and all the necessary instructional materials. All manuals, handouts, and other printed materials shall become the property of the attendees.

The Offeror shall provide all materials and equipment necessary to perform the training, and shall utilize actual equipment.

11.5 System Administration and Maintenance Training

The training seminar(s) shall be scheduled at least 30 days in advance for a minimum of two maintenance personnel, and shall include, but not be limited to, the following:

A. Distribution of literature.
B. A presentation of the equipment/system theory, configuration, and features.
C. A description of routine maintenance procedures with hands-on participation and troubleshooting techniques.
D. A question and answer session.

The Offeror shall provide all materials and equipment necessary to perform the training, and shall utilize actual equipment.

Following training, the Offeror shall provide two sets of instruction manuals sufficient to permit a duly qualified service technician to install, program, operate, and maintain the equipment purchased. The manuals shall reflect the equipment as built. In addition, a workstation user manual/pamphlet shall be provided to the State for each purchased workstation component.

The training manuals shall contain, but not be limited to:

A. A section defining the capabilities of the equipment (specifications).
B. A section describing the technical operation of the equipment.
C. A section pertaining to station user instructions.
D. A section describing the system installation, maintenance, programming, and operation of the equipment.

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12. PERFORMANCE VERIFICATION (ACCEPTANCE TEST) PROCEDURES

12.1 General Guidelines

These guidelines shall apply to all tests required to as part of the process to gain final acceptance of the system. The types of tests Offered and a detailed template of the test plan to accomplish these tests must be included in this Offer. It is anticipated that acceptance testing of each major equipment category or software module will be authorized and completed through a formal process. . An initial signature form would authorize the initiation of the testing and a follow up signature form would document agreement with successful completion of that series of testing.

These guidelines do not apply to any testing performed by the Offeror in preparation for performing these tests, during debugging of problems, or failure resolution because of failing a test.

12.1.1 Calculating Availability

For calculating availability during any described test period, the Offerors should assume a monthly scheduled system usage of 720 hours (24 hours a day, seven days a week). Any deviation from this method should be fully described.

12.1.2 Test Participants

The Offeror and the State shall agree about the participants for any given test or series of test. In no case, shall a test that is to be entered into the official record, be performed without a State representative or their designee present, unless the State designates in writing that attendance is not required. Any tests performed without proper participation shall be considered invalid and are not applicable. The State shall make persons available within 21 calendar days of notification by the Offeror.

12.1.3 Success Determination

The success of a formal test will be determined by the authorized test participants witnessing the test execution as outlined in the test plan and agreeing that the success criteria defined are met. In the case of an unclear result, the test will be repeated to clarify the result. In the case where the success criteria or test result is in question, the issues will be documented in writing and reviewed by the Project Managers and their designees. Should clarification of the test or its success criteria be necessary the test shall be repeated using the new form.

12.1.4 Tracking Defects

The Offeror shall describe the process and any related constraints to the process to be used to track the errors/issues/bug/problems/defects, etc found by either the State or the Offeror during the installation and testing of the system. To accomplish this the

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State anticipates that the Offeror will need to prepare and maintain a failure reporting system to ensure that all failures are reported properly to the State.

12.1.4.1 Availability

A failure log shall be available for inspection by the State at all times.

12.1.4.2 Scheduled Updates

A formal failure report shall be submitted to the State on a weekly basis.

12.1.4.3 Minimum Components

The report shall show, at a minimum, for each failure

A. Original complaint
B. Name of reporting party
C. Problem actually found
D. Date when report opened
E. Priority
F. Estimated Resolution date
G. Repairs performed and resolution
H. Itemized list of parts replaced or software modules modified
I. Technician's name
J. Any FCC required measurements made due to repairs
K. Date Closed

12.1.5 Unrelated Failures

Failures of equipment or the systems due to natural disasters, State negligence, vandalism or failure of State computers, State networks or unrelated system applications will not constitute a test failure. Failures of the described type will not relieve the Vendor from repeating any test, but such lost time will not be counted towards any agreed upon deadline.

12.1.6 Other Cases

Failures that are not described herein shall be dealt with on a case-by-case basis and resolved between the Offeror and the State.

12.1.7 Irreconcilable Differences

If the contract is negated because of failure of the equipment or software to operate successfully during the test period, the Offeror shall provide the State with the necessary packaging and shipping instructions, and the State, may at its discretion, shall then cause the equipment to be shipped to the Offeror at no cost to the State.

12.2 Component Testing

Each major equipment category or software module will require testing. The equipment shall be individually tested, and a performance test report shall be completed.

12.2.1 Schedule

This shall be accomplished during a period not to exceed 45 consecutive calendar days after equipment or software delivery, installation, and optimization. Any delays beyond this time shall be submitted in writing, and further disposition shall be affected by the factors involved in the delay.

12.3 Functional Acceptance Test

Part of the project activity includes a system design to determine exact CAD and MDCS functionality. The design will be accomplished by relying on published capabilities of the Offeror and specifications contained in this RFP. The functional acceptance test will be conducted to verify that the systems installed provide the expected functional capabilities in accordance with the system design criteria and specifications of this RFP. The Offeror will be expected to demonstrate to the State that each function and option operates according to the system design documentation and the specifications of this RFP. Should any failures be identified during the test, the Offeror will have a reasonable opportunity to correct the deficiencies, after which a retest may be scheduled. The State, at its sole discretion, may require a retest of the failed functions, or may elect to require the Offeror to conduct a complete retest. This process will continue until all functions have passed or it becomes obvious that the system under test will not support one or more functions that it was designed to accomplish.

To ensure that the systems purchased are the most beneficial to the State, a functional test similar to the above test may be required before the completion of proposal evaluation and Offeror selection. Offerors must be prepared to conduct such tests for the Offered system upon notification by the State. Adequate preparation times will be provided.

12.3.1 Coverage Verification

This specific test is outlined to ensure that the Offeror understands the anticipated scope of testing required for this aspect of the system. The exclusion of other test being described in this detail is not intended eliminate the need or detract from their importance. Minimally an outline of the vendors plan to perform the testing shall be provided and if available, an example of the results from a previous test should be provided.

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12.3.1.1 Successful Communications Definition

Successful Communications shall be defined as the ability to successfully send and receive a message with one transmission attempt from a vehicle.

12.3.1.2 Send and Receive Message Definition

The message to be sent from the vehicle shall be determined based upon the message model data provided by the Offeror based upon the application(s) provided. Selection of the size will be determined by the State during the detailed design task. User data may be compressed and encrypted prior to transmission.

12.3.1.3 Transmission Attempt Definition

A transmission attempt shall be defined as one initiation of a message transmission by either a mobile equipment operator/application or host application program connected to the network controller or vehicular modem. No message retransmissions other than those provided as part of the radio transmission protocol are permitted.

12.3.1.4 Radio Transmission Protocol Retransmissions

No more than three radio protocol user data transmission retries shall be permitted for the verification of the radio coverage design.

12.3.1.5 Communications Outside 95% Reliability Area

Areas that are identified as having less than that the specified Coverage Reliability as defined above but are deemed to provide lower but usable coverage reliability (between 80% and 94%) shall be tested at the discretion of the State with such redefinition of successful transmission as may be agreed by the State and the Offeror.

12.3.1.6 Test Point Selection

Radio communications reliability will be determined by performing field tests at various test locations. For this portion of the testing, the tested coverage will be on 2 mile increments of all State & Federal highways, within the Offeror provided coverage prediction plots. The State requires that the Offeror to meet or exceed the coverage shown in Figure 3 – Initial Coverage Goal. This area is primarily comprised of DPS Highway Patrol Districts 6, 8, and Phoenix Metro Districts 5,13, and 14 in Maricopa, Pima, and Pinal Counties. In addition, roads with usable coverage outside the contours, but within Maricopa, Pima, and Pinal Counties shall also be surveyed. Exact milepost marker delineations within the desired coverage area are provided in Table 5 - Mile Marker Defined Initial Coverage.

12.3.1.7 Test Apparatus

All tests shall be performed using the installed MDCS base station site equipment, network controller, and vehicular equipment.

12.3.1.8 Communications Reliability Verification Re-Testing

It shall be the responsibility of the Offeror to verify communications reliability by re-testing if any of the following conditions are met.

Following a successful or failed communications reliability test the Offeror or the Vendor's subcontractor alters the MDCS radio coverage design or MDCS parameters that effect communications reliability, including mobile or base equipment design, parameters or mobile or base antenna system configuration.

Base Station site equipment or mobile test equipment is found to have been defective or not operating properly during a previous failed test.

12.3.1.9 Test Equipment

It shall be the responsibility of the Offer to provide test equipment and software necessary to conduct the communications reliability tests. The test equipment and software shall employ the following features.

1. Track via an electronic log file that contains at a minimum the date, time, test location (Latitude and Longitude), mobile unit id and success or failure for each test point test.

2. Employ the identical radio/modem as being implemented.

3. Employ the identical mobile antenna system being implemented

4. Be installed by the Offeror in a representative vehicle(s) provided by the State.

5. Test equipment used for the test may make use of State MDCS mobile equipment.

12.3.1.9.1 Coverage Verification Testing Procedure

Coverage testing shall be performed from a moving vehicle (traffic conditions permitting) at mileposts within the guaranteed reliable communications area. At the specified highway intervals, a maximum of three attempts shall be executed. The test can be initiated based upon an operator input, or an automated script, or a combination of both.

12.3.1.10 Coverage Verification Test Success Criteria

At least 95% (+/- 0.1%) of mobile test points must demonstrate successful communications.

12.3.1.11 Log files

The results of the coverage testing shall be provided in several forms.

12.3.1.11.1 Raw File

One form shall be a raw unedited ASCII version of the drive testing results.

12.3.1.11.2 Analyzed File

Another form shall be the results of the statistical analysis of the raw file showing the quantity of messages and their results (pass/fail) and the statistical success rate.

12.3.1.11.3 Coverage Map Overlay

Another form will be a map showing the predicted coverage and actual test results as an overlay.

12.4 Throughput Acceptance Test

The Offeror must conduct and pass system throughput performance tests for each major subsystem purchased (i.e., CAD and MDCS). These tests will verify that the installed subsystems will meet the expected throughput capability and provide the expected operational speed and growth potential. The amount of throughput to be tested, both up-link and down-link, will be based on the average number of transactions experienced by the Communications Center, combined with the selected Offerors claim for system throughput capability.

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The throughput test must exercise every component of the System. Should any failures be identified during the test, the Offeror will have a reasonable opportunity to correct the deficiencies, after which a retest will be scheduled. The State, at its discretion, may require a retest of the failed functions or may elect to require a complete retest. This process will continue until all functions have passed or the system fails to provide the throughout required by the State.

Offerors shall provide details in their proposal(s) on how acceptance tests will be conducted. Final agreement on test procedures will be accomplished during contract negotiations.

System throughput testing will last for a minimum of one hour and involve sufficient transactions to validate the capabilities of the CAD and MDCS. All subsystems, including E9-1-1, ACJIS/NCIC, messaging, etc., will be exercised during this test. The Offeror shall prepare a test script designed to exercise every component of the System, and, with the concurrence of the State, use the test engine for the purposes of this test. As an alternative, the State will be responsible for providing the necessary staff to conduct the test.

To ensure that the system purchased is the one that will be most beneficial to the State, a throughput test similar to the above test may be required before the completion of proposal evaluation and vendor selection. Offerors must be prepared to conduct similar tests for the Offered systems upon notification by the State. Adequate preparation times will be provided.

12.5 Forty-Five (45) Day Reliability Testing

This testing will commence following the successful completion of all of the above test criteria.

12.5.1 Schedule

A reliability test period of Forty-five (45) consecutive calendar days of successful operation after installation and performance verification shall constitute a successful performance period.

12.5.2 Test Form

During the 45-day reliability test period, the State shall utilize the System for its intended purpose (in-service use) to test all operational modes and equipment configurations to ensure that all operational modes function properly and that all System "bugs" have been corrected. The use of the System during this performance test period shall not be interpreted as "acceptance" by the State.

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12.5.3 Successful Operation

Successful operation is defined as the absence of any major failure of equipment or software, or equipment or software function, which results in the disabling of a major equipment item, resulting in the inability of the overall System to perform as specified. Minor failures, such as operational problems and adjustments normally encountered during implementation of a new System, shall not constitute a failure in achieving successful operation. The Offeror should provide a concise definition of failures both major and minor as part of this response for the State to evaluate.

12.5.4 Failure Response Time

During the 45-day reliability test period, the Offeror shall provide replacement parts, materials, and qualified personnel to service the failed equipment at the sites of work within two working hours after notification of a major equipment failure as reported to the Offerors service facility. The Offeror shall have sufficient personnel and parts available to maintain the equipment so that the equipment can be repaired within eight hours after notification of equipment failure. This provision shall apply on a working-hour basis of 24 hours per day, seven days per week (including holidays).

12.5.5 Acceptable Hardware Failure Rate

Hardware and related equipment will be expected to perform at a 99.9-percent level of reliability, with a maximum of two periods of down time resulting from hardware or related equipment failures.

12.5.6 Acceptable Software Failure Rate

A maximum of two software component failures will be permitted during the 45-day testing period. Should the same software component fail more than once during the test, the Offeror must replace the software component. The repair/maintenance procedures in effect during the test will be the same repair/maintenance procedures that will be in effect during normal system operation after final system acceptance.

12.5.7 Acceptable Repair Time

Under no circumstances should it take longer than two hours to return the system to full service using swap-out procedures. If at any time spares are unavailable when needed, the test will be considered a failure. Any corrective redesign necessary to meet reliability requirements is the responsibility of the Offeror, and shall be accomplished without cost to the State.

12.5.8 Inability to Complete Test

In the event of a failure during any part of the test, testing must be restarted completely. Should it become obvious to the State that the test will never be

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successfully completed (after a minimum of three executions), the State may take action as defined elsewhere in this specification.

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13. DOCUMENTATION/MAINTENANCE TECHNICAL INFORMATION

All system documentation shall be delivered to the State Project Manager.

13.1 File Formats

Starting with the any documents related to this RFP, all documentation provided by the Offeror will be in Microsoft Office 2000 or any other format agreed to by the State. Any specialized software required to view, edit or otherwise maintain or use information provided by the Offeror will be provided and included as part of the Offer.

13.2 Instruction Manuals

The Offeror shall deliver to the State Project Manager three sets of instruction manuals sufficient to permit a duly qualified service technician to install, operate, and maintain the equipment purchased. The manuals shall reflect the equipment as designed, built, and installed. The cost of these manuals shall be included in the equipment cost.

For each type of equipment supplied, the Offeror shall provide an electronic copy and two complete printed sets of maintenance manuals and technical documentation. All documentation shall be delivered to the States Project Manager.

These manuals and documentation shall include all circuits, connections, and modifications, including wiring pertaining to all equipment, and the interface supplied. The manuals, support drawings, wiring diagrams, point-to-point wiring diagrams with color coding, and applicable circuit schematics shall be precisely and finely detailed and shall contain a complete and accurate replacement parts list. Each manual shall also contain a complete logic block plan chart and a logic print of all interconnected states, special panels with associated wiring, and all applicable test points.

The logic prints and charts shall accurately portray directional continuity of signal paths, keying paths, and interconnection of individual modules and adapters, including pertinent variations from the manufacturer's "standard" product. The logic prints and charts must be organized and drawn with swift and efficient troubleshooting foremost in mind. All superfluous sections not pertaining to maintenance or operation of this equipment must be deleted from the maintenance manual. Loose wire ends, unused terminals, or "tied back" wire ends shall also be designated.

All software provided shall be accompanied by technical documentation to include, but not necessarily limited to, program descriptions, data flow diagrams, file structures, data dictionaries, user manuals, training guides, language references, and screen forms. As updates to the software are installed, the updated documentation must also be received.

These requirements apply to all equipment and software supplied and to all modifications to existing equipment and software performed under the contract. Where such manuals are

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distributed by vendors other than the Offeror, the cost of subscription update service (in the name of the State) shall be included in the maintenance pricing.

13.3 Placing Drawings and Specifications

The Offeror shall maintain a copy of all drawings and specifications on the work in good order, which shall be available to the State and/or its agent and their representatives. These include, but are not limited to, as installed and as built site equipment layouts, detailed cabling diagrams, and dedicated electrical and communications outlets, plug, and jack configurations.

Numbering and labeling of all interconnecting cabling associated with the systems, gateways, firewalls, report servers, report review stations, host computer interfaces at the communication center or buildings. Numbering and labeling of all connections to punch-down blocks, patch panels, or computer hardware associated with the systems.

13.4 Installation Drawings and Maintenance Manuals

The Offeror shall furnish three sets of "as built" drawings and maintenance manuals for each site where work is performed no later than 30 days after completion of installation and testing. Each piece of electrical equipment installed in the building shall be provided with a maintenance manual that depicts circuit diagrams, as well as proper unit assembly and installation. All drawings and maintenance manuals shall include all modifications and revisions made to the original drawings, and completely reflect the final layout and configuration of all installed hardware.

13.5 Component Tracking

The Offeror shall prepare and maintain a service/repair record system. Each unit provided shall be maintained by serial number, version number, and if provided a State asset number.

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14. WARRANTY/MAINTENANCE

All equipment, software, and services furnished by the Offeror under the resulting contract shall be warranted free from defects in material and workmanship, and shall conform to this RFP and the Offerors response thereto, with all exceptions agreed to by the State. In the event any such defects in equipment, software, or services become evident within the warranty period, the Offeror shall correct the defect at its option by (1) repairing any defective component of the equipment; (2) furnishing necessary replacement parts; (3) otherwise correcting any reproducible and/or recurring software defects; or (4) redoing the faulty services. The Offeror is responsible for all charges incurred in returning defective parts to the Offerors, subcontractor's, or suppliers' plants, and in shipping repaired or replacement parts to the State. Labor to perform warranty services will be provided at no charge during the warranty period. Thereafter, the maintenance and service of the System will either be contracted out to the Offeror, contracted to a third party or provided by the State.

The Offeror further warrants that during the warranty period the equipment and software furnished under this contract shall operate under normal use and service as a complete System, which shall perform in accordance with this RFP and the Offerors response thereto, with all exceptions agreed to by the State.

The warranty period shall be a period of 12 months from the date of final system acceptance as defined herein. Claims under any of the warranties herein are valid if made within 30 days after termination of the warranty period. In addition, the following specific requirements apply to the Offerors warranty:

A. The Offeror warrants that all equipment furnished hereunder is new and of current manufacture.

B. The State shall notify the Offeror within a reasonable time after the discovery of any failure or defect within the warranty period.

C. Should the Offeror fail to remedy any failure or defect within 30 consecutive days after receipt of notice thereof, the parties shall meet and discuss an extension of time which may be fair and equitable under the circumstances, failing which the State shall have the right to replace, repair, or otherwise remedy such failure or defect at the Offerors expense.

D. The Offeror will obtain any warranties which subcontractors or suppliers to the Offeror give in the regular course of commercial practice, and shall apply the same to the benefit of the State.

E. The State will not be responsible for the storage of any equipment associated with the project.

F. The Offeror shall remedy at its own expense damage caused by the Offeror to the State owned or controlled real or personal property.

G. The Offeror shall be liable to the State for supply of information, materials, and labor necessary for mandatory revisions determined by the manufacturer for the duration of the warranty period at no cost to the State.

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H. Under this warranty, the Offeror shall remedy at its own expense any failure to conform to the general contract terms, System requirements, or any other document included by reference in this contract. The Offeror also agrees to remedy at its own expense any defect in materials or workmanship.

The "acceptance" of systems/equipment by the State shall not limit the States warranty rights set forth above with respect to defects in materials or workmanship.

14.1 Warranty on Additional Equipment

Warranty on any additional system hardware or software purchased after acceptance of the initial system will be for not less than 12 months after the date the hardware or software is accepted and placed in service.

14.2 Maintenance during the Warranty Period

The Offeror shall describe in the proposal how system and equipment maintenance and repair will be handled during the warranty period. During the warranty period, the Offeror will respond to all repair calls or notices of system malfunction at no additional cost to the State. Warranty service shall be on a 24-hour per day, 365-day per year basis. The Offeror will have qualified technicians available to respond to major system malfunctions within two hours and to minor system malfunctions within four hours during the warranty period. A major system malfunction is defined as one in which the entire system is out of service or in which system functionality is degraded to the point that the system is not substantially providing the level of usage required. A minor system malfunction is defined as one in which some system features are inoperative, not rendering the entire system unusable or significantly degraded. The State reserves the right to decide whether a system malfunction is classified as major or minor.

Acceptance of the work of the Offeror upon completion of the project shall not preclude the State from requiring strict compliance with the contract, in that the Offeror shall complete or correct upon discovery any faulty, incomplete, or incorrect work not discovered at the time of acceptance. The one-year limit specified above shall not void or limit this requirement for little-used features or functions.

14.3 Service under Warranty

If it becomes necessary for the State to contract with another vendor for warranty repairs, due to inability or failure of the Offeror to perform such repairs, the Offeror shall reimburse the State for all invoices for labor, materials required, and the shipping/handling costs thereof to perform such repairs, within 30 days from presentation of such invoices. This shall only occur after the Offeror has been given reasonable time and fair opportunity to respond and correct the problem(s). The cost limitation for such repairs will not exceed the parts and labor replacement price of the repair.

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14.4 Follow-On Maintenance Following Warranty Period

The Offeror shall include in the proposal a price for the follow-on maintenance described herein. The proposal price shall be for a five-year maintenance period starting 12 months after system acceptance.

14.4.1 Hardware

The Offeror will be required to provide system and equipment maintenance support to the State during and after expiration of the warranty period. The State will require a response time of no more than two hours for a "Major" failure of the system and no more than four hours for a "Minor" failure of the system.

The Offeror shall provide the following minimum information about its various maintenance plans for each of the following system components:

A. CPU, memory, and controller devices.
B. Storage and backup subsystems.
C. Communications devices and control devices.
D. Workstations, including CRT's and keyboards.
E. Printers.
F. All ancillary equipment required for efficient system operation.

14.4.1.1 Scope

The Offeror shall describe the scope of maintenance coverage and types of programs available to the State, and include all cost information in the proposal.

14.4.1.2 Preventive Maintenance Schedule

The Offeror shall specify the preventive maintenance schedule and estimate the amount of non-scheduled maintenance (system downtime) for each component of the Offered system. Maintenance will be performed according to the plan selected by the State.

14.4.1.3 Response Time

The Offeror shall specify the minimum and maximum time required to respond to calls for non-scheduled maintenance 24 hours per day, seven days per week, and the location(s) from which such maintenance will be provided.

14.4.1.4 Local Support Staff

The Offeror shall specify the number of maintenance personnel, where they are located, and the extent to which they will be available to support the installation.

14.4.1.5 Extended Failures

The Offeror shall describe the policy for expediting repair of equipment that has been inoperative for eight hours, 24 hours, and longer than 24 hours.

14.4.2 Maintenance of Offeror Furnished Software

The State requires that the Offeror maintain all Offeror-furnished software in a reliable operating condition, and incorporate the latest software changes applicable to the installed system.

14.4.2.1 Scope

The Offeror will describe the nature of their software maintenance coverage and program for maintaining reliable, efficient, and current software.

14.4.2.2 Software Policy

The maintenance contract pricing shall include providing and installing any system software patches, upgrades, enhancements, etc., developed by the software manufacturer during the maintenance contract period. The Offeror shall describe the methodology for each type of software provided.

14.4.2.3 Extraneous Application Support

The maintenance contract pricing shall include providing a documented number of hours of support for non-defective application support. This type of support will assist in system configuration, performance tuning, and other support that would normally fall outside the scope of a typical support call. The Offeror shall describe their willingness and associated cost to assist the client with system issues of this nature.

14.5 Continuation of Maintenance

In the event that the manufacture and sale of any component of the system is discontinued by the original equipment manufacturer, the Offeror will agree to provide continuous maintenance coverage, if desired by the State, for up to five years from the date the State is notified of the cessation of manufacture of the equipment.

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14.6 Designation of DPS as an Authorized Factory Repair Center

The Offeror shall indicate their willingness to designate DPS as an Authorized Factory Repair Center for all equipment provided by the Offeror, and describe the method by which this may be accomplished.

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15. PROPOSAL RESPONSE FORMS

The following response forms must be completed and included in the RFP response.

15.1 Response Matrix

Beyond providing a point-by-point response to each section of the RFP, the Offeror shall complete the response matrix, which summarizes the detailed responses. The section has the following columns as summarized below.

15.1.1 Section

This column is the reference number of each numbered requirement in the RFP

15.1.2 Title

This is the title of each number section of the RFP

15.1.3 Compliancy

The Offeror is required to respond with a "Yes" or "No" for each numbered requirement in the RFP.

15.1.4 Comments

This section is for the Offeror to elaborate on any answer that they desire. Note the point-by-point response should contain the bulk of the textual description, clarifications, etc.

15.2 Material List

A complete bill of material listing all items of equipment and components of the System Offered shall be included with the proposal. The bill of material shall show quantity, name of manufacturer, model or catalog number, material description, and unit and extended cost. If an equipment item has various options, the options that will be provided shall also be listed. The material list shall be organized and categorized by site, system, and subsystem such as CAD, MDCS, etc. The Offeror shall adhere as much as reasonably possible to the format provide in this section.

The price form is a Microsoft Excel 2000 worksheet with preformatted rows and columns. These are defined below. All columns must be filled out for each row that is entered. A few required rows are included in the original version of the worksheet and the Offeror is required to expand upon the listed items. Only using the listed items is not acceptable, a more detailed pricing list must be provided. The level of detail provided will factor into the evaluation process.

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15.2.1 Item

This column is provided so that a unique number can be applied to each item. This is included to help facilitate any discussions about specific cost items. The Offeror shall ensure that each item is uniquely numbered.

15.2.2 Catalog Number

This shall be a number that is commonly used by the manufacture to identify the model of a product to the public. If a line item does not have a part number assigned by a manufacture, and the Offer does not have a numbering system, the cell shall be filled in with "N/A."

15.2.3 Description

This column is providing space for a descriptive title for the item. This must be descriptive enough to distinguish the product or service from other similar products or services if multiple models are offered.

15.2.4 Quantity

This is how many of the specific item the Offeror is recommending based upon the requirements listed.

15.2.5 Unit Price

This is the Offered price for a single component. This cost is required so that departments wishing to utilize the contract during the agreed upon period clearly understand the amount to budget for that item. It is understood that some products or services may require case-by-case quotations.

15.2.6 Base System Extended Price

This shall be the result of multiplication of the quantity by the unit cost for each component provided as part of the base Offer.

15.2.7 Optional Extended Price

This shall be the result of multiplication of the quantity by the unit cost for each optional component provided as part of the Offer.

15.3 Ongoing Maintenance Price

The annual maintenance price form is a Microsoft Excel 2000 worksheet with preformatted rows and columns. These are defined below. All columns must be filled out for each row that is entered. A few required rows are included in the original version of the worksheet and the Offeror is required to expand upon the listed items. Only using the listed items is not

acceptable, a more detailed pricing list must be provided. The level of detail provided will factor into the evaluation process.

15.3.1 Item #

This column is provided so that a unique number can be applied to each item. This is included to help facilitate any discussions about specific cost items. The Offeror shall ensure that each item is uniquely numbered.

15.3.2 Catalog Number

This shall be a number that is commonly used by the manufacture to identify the model of a product to the public. If a line item does not have a part number assigned by a manufacture, and the Offer does not have a numbering system, the cell shall be filled in with "N/A."

15.3.3 Description

This column is providing space for a descriptive title for the item. This must be descriptive enough to distinguish the product or service from other similar products or services if multiple models are offered.

15.3.4 Quantity

This is how many of the specific item the Offeror is recommending based upon the requirements listed.

15.3.5 Unit Price

This is the Offered price for a single component. This cost is required so that departments wishing to utilize the contract during the agreed upon period clearly understand the amount to budget for that item. It is understood that some products or services may require case-by-case quotations.

15.3.6 Extended Price

This shall be the result of multiplication of the quantity by the unit cost.

15.4 Installation Schedule/Cutover Plan

The Offeror shall submit as part of the proposal a Gantt chart timeline illustrating each major implementation task. The Offer shall also include a cutover plan for an efficient transition from the existing system to the Offered system.

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15.5 Compliant Proposal Package Response Forms

Offerors must use the forms in this section (included at the end of this section) to indicate compliance or non-compliance with the requirements of this RFP. If the referenced RFP section requires an agree/disagree response rather than compliant/non-compliant, check the "yes" box for "agree" and the "no" box for "disagree," along with any pertinent comments. Failure to comply may result in disqualification.

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15.6 Offeror's Background Information

This questionnaire is to be submitted to the State by the Offeror, along with the proposal being submitted for the goods and/or services required by the State. Do not leave any questions unanswered. When the question does not apply, write the word(s) "None," or "Not Applicable," as appropriate. Failure to complete this form, when applicable, may disqualify your proposal.

LICENSES

A. State occupational license number (attach a copy): _____

B. Occupational license classification: _____

C. License expiration date: _____

D. State license number (attach a copy): _____

INSURANCE

A. Name of insurance carrier: _____

B. Type of coverage: _____

C. Limits of Liability: _____

D. Coverage/policy dates: _____

E. Name of insurance agent: _____

Agent(s) telephone including area code: _____

EXPERIENCE

A. Number of years your organization has been in business: _____

B. Number of years of experience the Offeror (person, principal of firm, owner) has had in operations of the type required by the specifications of the proposal: _____

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C. Number of years of experience the Offeror (firm, corporation, proprietorship) has had in operations of the type required by the specifications of the proposal: _____

D. Experience record: List past and/or present contracts, work, and jobs that the Offeror has performed of a type similar to that required by specifications of the proposal:

FIRM NAME/ADDRESS/PHONE	DATE OF JOB (Start/Stop)	DESCRIPTION OF JOB

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E. References: List references who may be contacted to ascertain experience and ability of the Offeror.

NAME/FIRM	ADDRESS	CONTACT PERSON	TELEPHONE NUMBER

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F. Has Offeror carefully inspected the job sites: Yes / No

G. TO PROVIDE ANY ADDITIONAL INFORMATION AS TO QUALIFICATIONS AND/OR EXPERIENCE, ATTACH DOCUMENTATION TO THIS FORM.

Name of Offeror (Firm)	Signature of Authorized Agent (Owner, Principal)
Date	Type or Print Name of Agent

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16. COMPLIANCE MATRIX

Section #	Title	Compliancy	Comments
1	INTRODUCTION		
1.1	Project Background		
1.2	Approach		
1.3	Project Scope		
1.4	Project Milestones		
1.5	Request for Proposal		
1.6	Other Agencies Within the State		
1.6.1	Add-Option (Maricopa County)		
2	CURRENT OPERATIONS		
2.1	Computer Aided Dispatch (CAD)		
2.1.1	Overview of Existing Operations		
2.1.2	Current Staffing Levels and Dispatch Workstations		
2.1.3	Transaction Volumes		
2.1.4	Current Dispatch Procedures - Phoenix		
2.1.4.1	Call Taking		
2.1.4.2	Call Handling		
2.1.4.3	Resources		
2.1.4.4	Unit Status		
2.1.4.5	Emergency Medical System Communications (EMSCOM)		
2.1.5	Current Dispatch Procedures - Tucson		
2.1.5.1	Call Taking		
2.1.5.2	Call Handling		
2.1.5.3	Resources		
2.1.5.4	Unit Status		
2.1.6	Current Dispatch Procedures - Flagstaff		
2.1.7	Dispatch Procedures Common to the Three Dispatch Centers		
2.1.7.1	Resources		
2.1.7.2	Welfare Checks		
2.1.7.3	Department report number (DR Number) Assignment		
2.1.7.3.1	Other Duties		
2.1.8	System Interfaces		
2.1.8.1	E-9-1-1 Interface		
2.1.8.2	Emergency Medical Services Communication (EMED)		

2.1.8.3	ACJIS/NCIC/NLETS and Mainframe Application Programs Interface		
2.1.8.4	Palo Verde Nuclear Power Plant		
2.1.8.5	Mobile Data Computer System Interface		
2.1.9	Operations Communications' (OPCOMM) Wide Area Network		
2.1.10	Mainframe Applications Used by Operations Communications (OPCOMM)		
2.1.10.1	General Applications		
2.1.10.2	ACJIS Inquiry Transactions		
2.1.10.3	NCIC Inquiry Transactions		
2.1.10.4	Motor Vehicle Division (MVD) Inquiry Transactions		
2.1.10.5	NLETS Inquiry Transactions		
2.2	Current Mobile Data Computer System		
2.3	State Standards and Preferences		
3	UNIFORM INSTRUCTIONS TO OFFERORS		
4	UNIFORM TERMS AND CONDITIONS		
5	SPECIAL INSTRUCTIONS TO OFFERORS		
5.1	Offeror's Responsibility		
5.2	Proposal Format/Cost oif Proposal Preparation		
5.3	Offer and Acceptance		
5.4	Organization of the Request for Proposal		
5.4.1	Documentation Required as Part of Proposal Submission		
5.5	Use of Proprietary Product Names or Manufactures		
5.6	Technical Information/Exceptions		
5.7	Demonstration Models		
5.8	Complete, Unambiguous, Concise Responses		
5.9	Proposal Response Forms		
5. 10	Proposal Evaluation		
5.11	Evaluation Criteria		
5.12	Offeror Presentation		
5.13	Multiple Awards		
5.14	Payment Schedule		
5.15	Project Management		
5.16	Subcontractors		
5.17	Liquidated Damages		
5.18	Compensation of Offeror's Employees, Subcontractors, and Suppliers		

5.19	Radio Frequency Interference		
5. 20	Facility Tours		
5.21	Notice to Proceed		
5.22	Ordering of Equipment		
5.23	Reference to Time		
5.24	Components and Connectivity Source		
6	SPECIAL TERMS AND CONDITIONS		
6.1	Authority to Contract		
6.2	Eligible Agencies (Statewide):		
6.3	Contract Type (Term):		
6.4	Proposal Opening:		
6.5	Estimated Quantities (General):		
6.6	Exclusive Contract:		
6.7	Licenses:		
6.8	Proposal Bond		
6.9	Performance Bond		
6. 10	Insurance		
6.11	Delivery		
6.12	Term of Contract (1 Year from Award)		
6.13	Contract Renewal:		
6.14	Prices		
6.15	Additional Quantities		
6.16	Price Adjustments (After 1 Year)		
6.17	Discount Rates:		
6.18	Safety Standards:		
6.19	Current Projects:		
6. 20	Serial Numbers:		
6.21	Warranty (12 Months):		
6.22	Defective Products:		
6.23	Maintenance:		
6.24	Inventory:		
6.25	Product Discontinuance (Categories):		
6.26	Ordering Process		
6.27	Shipping F.O.B. Statewide:		

6.28	Billing:		
6.29	Usage Report:		
6. 30	Contraband		
6.31	Post-Award Meetings:		
6.32	State Contract Show Availability:		
7	EQUIPMENT INSTALLATION REQUIREMENTS		
7.1	General		
7.2	Equipment Mounting		
7.3	Facility Familiarity		
7.4	Site Access		
7.5	Cutover Plan		
7.5.1	Detailed Design Plan		
7.5.2	Final Plan		
7.6	Quality Assurance Requirements		
7.6.1	Installation Support		
7.6.2	Description of Procedures		
7.6.3	Measuring and Testing Equipment		
7.6.4	Use of Offeror's Inspection Equipment		
7.6.5	Control of Subcontracted Supplies		
7.6.6	Subcontract Data		
7.6.7	Review and Processing of Subcontracts		
7.6.8	Receiving Inspection		
7.6.9	Special Processes		
7.6.10	Inspection of Completed Supplies		
7.6.11	Sampling Inspection		
7.6.12	Indication of Inspection Status		
7.6.13	Non-Conforming Supplies		
7.6.14	Material Furnished by the State		
7.6.15	Damaged Material Furnished by the State		
7.6.16	Evidence of Approvals		
7.6.17	Storage		
7.6.18	Quality Control Records		
7.6.19	Corrective Action		
7.6.20	Resistance to Interference		

7.6.21	Emissions Criteria		
7.6.22	Remedy		
7.6.23	Other System Equipment		
7.6.24	Equipment Installation Standards		
7.6.25	Scheduling of Equipment Installation		
7.6.26	Inspections		
7.6.27	Installation Crew(s)		
7.6.28	Crew Approval		
7.6.29	Installation Location		
7.6.30	Other Equipment Relocation		
7.6.31	Site Clean Up Requirements		
7.6.32	Responsibility for Offeror Equipment		
7.6.33	Testing of Equipment and Construction		
7.6.34	Salvaged Material		
7.6.35	Protection of Work and Property		
8	COMPUTER AIDED DISPATCH SYSTEM REQUIREMENTS		
8.1	Server Requirements		
8.1.1	Model		
8.1.2	Scalability		
8.1.3	Mounting		
8.1.4	Architecture		
8.1.5	LAN Connectivity		
8.1.6	Interfaces		
8.1.7	Backups		
8.1.8	Phoenix Installation		
8.1.9	Tucson Installation		
8.1.10	Flagstaff Installation		
8.1.11	Fault Tolerance		
8.1.12	Control Console		
8.1.13	Remote Access		
8.1.14	Interface Connections		
8.1.15	WAN connectivity		
8.1.16	System Reliability		
8.1.17	Quantity Terminals Supported		

8.1.18	Response Time		
8.1.19	Disk Storage Subsystems		
8.1.20	Operating System Requirements		
8.1.20.1	Application Management		
8.1.20.2	Memory Management		
8.1.20.3	I/O Management		
8.1.20.4	System Status Reporting		
8.1.20.5	Process Offloading		
8.1.20.6	Dual Processor Support		
8.1.21	System Level Software		
8.1.22	System Responsiveness		
8.1.23	System Security		
8.2	Workstation/Terminal Functionality		
8.2.1	Security Profiles		
8.2.2	Status Monitoring		
8.2.3	Architecture		
8.2.4	User Interface		
8.2.5	Processor		
8.2.6	Memory		
8.2.7	Disk Drive		
8.2.8	Network Adapter		
8.2.9	Peripheral		
8.2.10	Display		
8.2.11	Keyboard		
8.2.12	Point Device		
8.2.13	Power Protection		
8.2.14	Operating System		
8.2.15	Standard Applications		
8.2.16	Regulatory		
8.2.17	Standard Functions		
8.2.18	Quantity		
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8.3	General Server and Workstation Requirements		
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8.3.2	Software Upgrades		
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8.4.1	General Functional Requirements		
8.4.1.1	Position Functionality		
8.4.1.2	Multi Agency Support		
8.4.1.3	Incident Routing		
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8.4.1.6	Utilities		
8.4.1.7	Display Printing		
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8.4.1.10	Command Line Support		
8.4.1.11	Function Selection		
8.4.1.12	Email/ Messaging		
8.4.1.13	Training Sub-system		
8.4.1.14	Locally Archived Records		
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8.4.1.19	Sharing CAD Information with Other CAD Systems(Future Standards Compliance)		
8.4.1.20	Log on/Log Off Control		
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8.4.3.1	Location Validation/Geo-File Lookups		
8.4.3.2	Advisory Information		
8.4.3.3	Urgent Incidents		
8.4.3.4	Interruption of Incident Intake for More Urgent Incidents		
8.4.3.5	Incident Routing		

8.4.3.6	Incident Priority		
8.4.3.7	Duplicate Event Detection		
8.4.3.8	Adding Information		
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8.4.3.10	Non-Dispatched "Advised" Incidents		
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8.4.4.1	Selecting Pending Incidents		
8.4.4.2	Dispatch Screen		
8.4.4.3	Unit Recommendation		
8.4.4.4	Dispatching Units		
8.4.4.5	Incident and Unit Status Maintenance		
8.4.4.6	Updating Incidents		
8.4.4.7	Releasing and Reassigning Units		
8.4.4.8	Incident Completion		
8.4.4.9	Status Monitoring		
8.4.4.10	Changing Duty Roster and Shift Changes		
8.4.4.11	Incident History		
8.4.4.12	Unit History		
8.4.4.13	Field Initiated Events		
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8.4.4.15	Pending Incident Display		
8.4.4.16	Pending Incident Timers		
8.4.4.17	Transferring Units		
8.4.4.18	Transferring Incidents		
8.4.4.19	Transferring Dispatch Position Responsibilities		
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8.4.6	Management Information System (MIS) and Reporting		
8.4.7	Geo-File Requirements		
8.4.7.1	GIS Data		
8.4.7.2	Jurisdiction (Geography)		
8.4.7.3	Data Accuracy		
8.4.7.4	Data Organization		
8.4.7.5	Other Available GIS Applications		

8.4.7.6	Geo-file management System Requirements		
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9.1.1	Site Pool		
9.1.1.1	Add-Option for Maricopa County:		
9.1.2	Frequency Pool		
9.1.2.1	800 MHz Group		
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9.1.3	Initial Coverage Requirement		
9.1.3.1.	Add-Option for Maricopa County:		
9.1.4	Network Controller		
9.1.4.1	Distinguishing Information		
9.1.4.2	Main Processor		
9.1.4.3	Clock Speed		
9.1.4.4	Memory		
9.1.4.5	Power Requirements		
9.1.4.6	Hard Disk Drive		
9.1.4.7	Other Storage Mediums		
9.1.4.8	Reliability		
9.1.4.9	Performance		
9.1.4.10	Initial Subscriber Support		
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9.1.4.11.1	Add-Option for Maricopa County:		
9.1.4.12	Network Controller Network Interface		
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9.1.4.12.2	Data Link Layer		
9.1.4.12.3	Network Layer		
9.1.4.12.4	Transport Layer		
9.1.4.13	Subscriber Distribution		
9.1.4.14	Transmitters Supported		
9.1.4.15	Recommended Location		
9.1.5	Base Station		
9.1.5.1	Interface Description		

9.1.5.2	Over the Air Data Rate		
9.1.5.3	Date Rate Migration		
9.1.5.4	Throughput Optimization		
9.1.5.5	Wired Interface Baud Rate		
9.1.5.6	Physical Interface		
9.1.5.7	Over the Air Communication Protocol		
9.1.5.8	Wired Communication Protocol		
9.1.5.9	Input Voltage		
9.1.5.10	Receiver Data Sensitivity		
9.1.5.11	Receiver Selectivity		
9.1.5.12	Receiver Intermodulation Rejection		
9.1.5.13	Receiver Spurious & Image Rejection		
9.1.5.14	Receiver Frequency Stability		
9.1.5.15	Receiver Antenna Port Impedance		
9.1.5.16	Transmit Power		
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9.1.5.18	Transmitter Frequency Stability		
9.1.5.19	Transmitter Antenna Port Impedance		
9.1.5.20	Channel Contention		
9.1.5.21	Error and Fault Handling		
9.1.5.21.1	Error Correction		
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9.1.5.23	Automatic Station Identification		
9.1.6	Alarm Functionality		
9.1.6.1	System Alarm Logging		
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9.1.6.1.2	System Alarm Forwarding		
9.1.6.1.3	Base Station Alarm Support		
9.1.6.1.4	System Status		
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9.2.1	Distinguishing Information		
9.2.2	A/C Adapter		
9.2.3	Air Bag Deployment		
9.2.4	Airborne Contaminates		
9.2.5	Auto Power Sensing		
9.2.6	Battery Life		
9.2.7	Battery Type		
9.2.8	Bracket Selection		
9.2.9	Carrying Handle		
9.2.10	CD ROM Drive		
9.2.11	Clock Speed		
9.2.12	Cursor Control		
9.2.13	Display Specifications		
9.2.13.1	Brightness Control		
9.2.13.2	Colors		
9.2.13.3	Viewing Area		
9.2.13.4	Viewing Angle		
9.2.13.5	Screen Area		
9.2.13.6	Screen Readability		
9.2.14	Docking Apparatus		
9.2.15	Drop Resistance		
9.2.16	Electromagnetic Interference (EMI)		
9.2.17	Existing Equipment		
9.2.18	Floppy Drive		
9.2.19	Hard Disk Drive		
9.2.20	Housing Material		
9.2.21	Humidity		
9.2.22	Industry Experience		
9.2.23	Keyboard		

9.2.24	Keyboard Illumination		
9.2.25	Main Processor		
9.2.26	Mean Time Between Failures (MTBF)		
9.2.27	Memory		
9.2.28	Mounting Location		
9.2.29	Mounting Strategy		
9.2.30	Ongoing Support		
9.2.31	Upper Operating Temperature		
9.2.32	Lower Operating Temperature		
9.2.33	PCMCIA Ports		
9.2.34	Performance		
9.2.35	Power Issues		
9.2.36	Power Requirements		
9.2.37	Power Switch		
9.2.38	Previous Installs		
9.2.39	Radio Modem		
9.2.40	Removable Computers		
9.2.41	Repetitive Shock		
9.2.42	Repetitive Vibration		
9.2.43	Serialization		
9.2.44	Serial Ports		
9.2.45	Shock Mounting		
9.2.46	Speaker		
9.2.47	Spill Resistance		
9.2.48	Upper Storage Temperature		
9.2.49	Lower Storage Temperature		
9.2.50	Stowed Position		
9.2.51	Theft Prevention		
9.2.52	Touch Screen		
9.2.53	USB Port		
9.3	Two Piece - Vehicular Hardware		
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9.3.2	A/C Adapter		
9.3.3	Air Bag Deployment		

9.3.4	Airborne Contaminates		
9.3.5	Auto Power Sensing		
9.3.6	Battery Life		
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9.3.15	Drop Resistance		
9.3.16	Electromagnetic Interference (EMI)		
9.3.17	Existing Equipment		
9.3.18	Floppy Drive		
9.3.19	Hard Disk Drive		
9.3.20	Housing Material		
9.3.21	Humidity		
9.3.22	Industry Experience		
9.3.23	Keyboard		
9.3.24	Keyboard Illumination		
9.3.25	Main Processor		
9.3.26	Mean Time Between Failures (MTBF)		
9.3.27	Memory		
9.3.28	Mounting Location		
9.3.29	Mounting Strategy		
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9.3.31	Upper Operating Temperature		

9.3.32	Lower Operating Temperature		
9.3.33	PCMCIA Ports		
9.3.34	Performance		
9.3.35	Power Issues		
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9.3.37	Power Switch		
9.3.38	Previous Installs		
9.3.39	Radio Modem		
9.3.40	Removable Computers		
9.3.41	Repetitive Shock		
9.3.42	Repetitive Vibration		
9.3.43	Serialization		
9.3.44	Serial Ports		
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9.3.46	Speaker		
9.3.47	Spill Resistance		
9.3.48	Upper Storage Temperature		
9.3.49	Lower Storage Temperature		
9.3.50	Stowed Position		
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9.3.52	Touch Screen		
9.3.53	USB Port		
9.4	Three Piece - Vehicular Hardware		
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9.4.2	A/C Adapter		
9.4.3	Air Bag Deployment		
9.4.4	Airborne Contaminates		
9.4.5	Auto Power Sensing		
9.4.6	Battery Life		
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9.4.9	Carrying Handle		
9.4.10	CD ROM Drive		
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9.4.29	Mounting Strategy		
9.4.30	Ongoing Support		
9.4.31	Upper Operating Temperature		
9.4.32	Lower Operating Temperature		
9.4.33	PCMCIA Ports		
9.4.34	Performance		
9.4.35	Power Issues		
9.4.36	Power Requirements		
9.4.37	Power Switch		
9.4.38	Previous Installs		
9.4.39	Radio Modem		

9.4.40	Removable Computers		
9.4.41	Repetitive Shock		
9.4.42	Repetitive Vibration		
9.4.43	Serialization		
9.4.44	Serial Ports		
9.4.45	Shock Mounting		
9.4.46	Speaker		
9.4.47	Spill Resistance		
9.4.48	Upper Storage Temperature		
9.4.49	Lower Storage Temperature		
9.4.50	Stowed Position		
9.4.51	Theft Prevention		
9.4.52	Touch Screen		
9.4.53	USB Port		
9.5	Vehicular Applications		
9.5.1	Application Compatibility		
9.5.2	Application Customization		
9.5.3	Application Level Encryption		
9.5.4	Background Operation		
9.5.5	Data Entry		
9.5.5.1	Frequently Used Keys		
9.5.5.2	Form Retrieval		
9.5.5.3	Moving Data		
9.5.5.4	Movement between Fields		
9.5.5.5	Pick Lists		
9.5.5.6	User Interface		
9.5.5.7	Unit Status		
9.5.6	Delivery Notification		
9.5.7	Functions		
9.5.8	Help Functions		
9.5.9	Logon		
9.5.10	Multi User Vehicles		
9.5.11	Night Operation		
9.5.12	Operating System		

9.5.13	Text Size		
9.5.14	Use of Color		
9.5.15	Unable to Parse Data		
9.6	Remote Subscriber Management		
9.6.1	Pick List and Defaults		
9.6.2	Software Updates		
9.6.3	User Defined Configuration		
9.7	Features		
9.7.1	CAD Access		
9.7.1.1	Call Receipt		
9.7.1.2	CAD Call Inquiry		
9.7.1.3	CAD Status Entry		
9.7.1.4	Status Inquiry		
9.7.1.5	Text Messaging		
9.7.2	State & Federal Database Access		
9.7.2.1	Inquiry		
9.7.2.2	Inquiry Response		
9.7.2.3	Hit Notification Suppression		
9.7.3	Emergency Messages		
9.7.3.1	Defined Recipients		
9.7.3.2	Generation		
9.7.3.3	Receipt		
9.7.4	Text to Voice		
9.7.5	Form Features		
9.7.5.1	Audible Alerts		
9.7.5.2	Current Time		
9.7.5.3	Message View/Delete		
9.7.5.4	Message Waiting Indication		
9.7.5.5	Time Stamp		
9.7.5.6	Transmission Status		
9.8	Capacity		
9.8.1	RF Bandwidth Sensitivity		
9.8.2	Multiple RF Interfaces		
9.8.3	Wired Access		

9.9	User File Maintenance		
9. 10	Security		
9.10.1	Application Access		
9.10.2	Access Restrictions		
9.10.3	Timed Screen Lock		
9.10.4	Operator Initiated Screen Lockout		
9.10.5	Application Logout		
9.10.6	Information Retention		
9.10.7	Storage Encryption		
9.11	Certification of Basic Operation		
10	SYSTEM INTERFACES		
10.1	Alphanumeric Paging		
10.2	Arizona Law Enforcement Telecommunications System (ACJIS)		
10.3	Optional Automatic Vehicle Location (AVL) Interface		
10.4	CAD to RMS Interface		
10.5	Caller ID		
10.6	E9-1-1 Telephone Systems		
10.7	Geographic Information System (GIS)		
10.8	Local Network		
10.8.1	Segmentation		
10.8.2	Ethernet Switching		
10.8.3	Host System Expansion		
10.8.4	Network Baseline		
10.9	Mainframe Applications		
10. 10	Mobile Data Computer System		
10.11	Other CAD Systems		
10.12	Voice Radio System		
10.13	TDD		
10.14	Time Synchronization Device		
10.14.1	CAD Timestamps		
10.14.2	MDCS Timestamps		
11	TRAINING REQUIREMENTS		
11.1	CAD and MDCS Training		
11.2	System Operations		

11.3	Minimum Personnel Training Requirements		
11.4	Training Manuals, Handouts, and Equipment		
11.5	System Administration and Maintenance Training		
12	PERFORMANCE VERIFICATION (ACCEPTANCE TEST) PROCEDURES		
12.1	General Guidelines		
12.1.1	Calculating Availability		
12.1.2	Test Participants		
12.1.3	Success Determination		
12.1.4	Tracking Defects		
12.1.4.1	Availability		
12.1.4.2	Scheduled Updates		
12.1.4.3	Minimum Components		
12.1.5	Unrelated Failures		
12.1.6	Other Cases		
12.1.7	Irreconcilable Differences		
12.2	Component Testing		
12.2.1	Schedule		
12.3	Functional Acceptance Test		
12.3.1	Coverage Verification		
12.3.1.1	Successful Communications Definition		
12.3.1.2	Send and Receive Message Definition		
12.3.1.3	Transmission Attempt Definition		
12.3.1.4	Radio Transmission Protocol Retransmissions		
12.3.1.5	Communications Outside 95% Reliability Area		
12.3.1.6	Test Point Selection		
12.3.1.7	Test Apparatus		
12.3.1.8	Communications Reliability Verification Re-Testing		
12.3.1.9	Test Equipment		
12.3.1.9.1	Coverage Verification Testing Procedure		
12.3.1.10	Coverage Verification Test Success Criteria		
12.3.1.11	Log files		
12.3.1.11.1	Raw File		
12.3.1.11.2	Analyzed File		
12.3.1.11.3	Coverage Map Overlay		

12.4	Throughput Acceptance Test		
12.5	Forty-Five (45) Day Reliability Testing		
12.5.1	Schedule		
12.5.2	Test Form		
12.5.3	Successful Operation		
12.5.4	Failure Response Time		
12.5.5	Acceptable Hardware Failure Rate		
12.5.6	Acceptable Software Failure Rate		
12.5.7	Acceptable Repair Time		
12.5.8	Inability to Complete Test		
13	DOCUMENTATION/MAINTENANCE TECHNICAL INFORMATION		
13.1	File Formats		
13.2	Instruction Manuals		
13.3	Placing Drawings and Specifications		
13.4	Installation Drawings and Maintenance Manuals		
13.5	Component Tracking		
14	WARRANTY/MAINTENANCE		
14.1	Warranty on Additional Equipment		
14.2	Maintenance during the Warranty Period		
14.3	Service under Warranty		
14.4	Follow-On Maintenance Following Warranty Period		
14.4.1	Hardware		
14.4.1.1	Scope		
14.4.1.2	Preventive Maintenance Schedule		
14.4.1.3	Response Time		
14.4.1.4	Local Support Staff		
14.4.1.5	Extended Failures		
14.4.2	Maintenance of Offeror Furnished Software		
14.4.2.1	Scope		
14.4.2.2	Software Policy		
14.4.2.3	Extraneous Application Support		
14.5	Continuation of Maintenance		
14.6	Designation of DPS as an Authorized Factory Repair Center		
15	PROPOSAL RESPONSE FORMS		

15.1	Response Matrix		
15.1.1	Section #		
15.1.2	Title		
15.1.3	Compliancy		
15.1.4	Comments		
15.2	Material List		
15.2.1	Item #		
15.2.2	Catalog Number		
15.2.3	Description		
15.2.4	Quantity		
15.2.5	Unit Price		
15.2.6	Base System Extended Price		
15.2.7	Optional Extended Price		
15.3	Ongoing Maintenance Price		
15.3.1	Item #		
15.3.2	Catalog Number		
15.3.3	Description		
15.3.4	Quantity		
15.3.5	Unit Price		
15.3.6	Extended Price		
15.4	Installation Schedule/Cutover Plan		
15.5	Compliant Proposal Package Response Forms		
15.6	Offeror's Background Information		
16	COMPLIANCE MATRIX		
17	PRICING SHEETS		

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17. PRICING SHEETS

Item	Catalog (Part and/or Model Number)	Description	Quantity	Unit Price	Base System Extended Price	Optional Extended Price
		CAD System Software and Installation Services				
		Base CAD System Software				
1		Phoenix Dispatch Center			$ -	
2		Tucson Dispatch Center			$ -	
3		Flagstaff Dispatch Center (Optional)				$ -
		CAD Tactical Map Display Software				
4		Phoenix Dispatch Center			$ -	
5		Tucson Dispatch Center			$ -	
6		Flagstaff Dispatch Center (Optional)				$ -
		CAD Management Information System and Reporting Software				
7		Phoenix Dispatch Center			$ -	
8		Tucson Dispatch Center			$ -	
9		Flagstaff Dispatch Center (Optional)				$ -
		CAD Geofile Conversion/update/testing/installation				
10		Phoenix Dispatch Center			$ -	
11		Tucson Dispatch Center			$ -	
12		Flagstaff Dispatch Center (Optional)				$ -
		CAD Database Creation/Installation/Testing				
13		Phoenix Dispatch Center			$ -	
14		Tucson Dispatch Center			$ -	
15		Flagstaff Dispatch Center (Optional)				$ -
		CAD System Hardware				
		CAD Server Hardware				
16		Phoenix Dispatch Center			$ -	
17		Tucson Dispatch Center			$ -	
18		Flagstaff Dispatch Center (Optional)				$ -
		CAD Server Software and Operating System				
19		Phoenix Dispatch Center			$ -	
20		Tucson Dispatch Center			$ -	
21		Flagstaff Dispatch Center (Optional)				$ -
		CAD Server Console				
22		Phoenix Dispatch Center			$ -	
23		Tucson Dispatch Center			$ -	
24		Flagstaff Dispatch Center (Optional)				$ -
		CAD remote dialup servers, modems, racks, cables and installation				
25		Phoenix Dispatch Center			$ -	
26		Tucson Dispatch Center			$ -	

27		Flagstaff Dispatch Center (Optional)				$ -
		CAD Call Taker Workstations				
28		Phoenix Dispatch Center			$ -	
29		Tucson Dispatch Center			$ -	
30		Flagstaff Dispatch Center (Optional)				$ -
		CAD Dispatcher/supervisor Workstations				
31		Phoenix Dispatch Center			$ -	
32		Tucson Dispatch Center			$ -	
33		Flagstaff Dispatch Center (Optional)				$ -
		Time Synchronization Device (Optional)				
34		Phoenix Dispatch Center				$ -
35		Tucson Dispatch Center				$ -
36		Flagstaff Dispatch Center (Optional)				$ -
		CAD System Cabling, Network Hardware and Network Software for the Communications Room				
37		Phoenix Dispatch Center			$ -	
38		Tucson Dispatch Center			$ -	
39		Flagstaff Dispatch Center (Optional)				$ -
		CAD Laser Printers				
40		Phoenix Dispatch Center			$ -	
41		Tucson Dispatch Center			$ -	
42		Flagstaff Dispatch Center (Optional)				$ -
		Mobile Data Computer System				
43		MDC Software Base Functions (Security, Dispatch, Status updates, etc.)			$ -	
44		MDC Messaging Software Module (CAD to vehicle, Vehicles to Vehicle, etc.)			$ -	
45		MDC Query Software (ACJIS/NCIC, CAD etc.)			$ -	
46		MDC AVL Software (Optional)				$ -
47		MDCS Message Switch (if required)			$ -	
48		MDCS Sever (if required)			$ -	
49		Vehicular Modems			$ -	
50		Antennas			$ -	
51		Device Mounting and Installation Labor			$ -	
		One Piece Units (Quantity 1-50)				
52		Computers (CPU, Display, Power Supply, Memory, etc.)			$ -	
53		Mounting Hardware			$ -	
54		Device Mounting and Installation Labor			$ -	
		One Piece Units (Quantity 51-150)				
55		Computers (CPU, Display, Power Supply, Memory, etc.)			$ -	
56		Mounting Hardware			$ -	
57		Device Mounting and Installation Labor			$ -	

		One Piece Units (Quantity 151-250)				
58		Computers (CPU, Display, Power Supply, Memory, etc.)			$ -	
59		Mounting Hardware			$ -	
60		Device Mounting and Installation Labor			$ -	
		Two Piece Units (Quantity 1-50)				
61		Computers (CPU, Display, Power Supply, Memory, etc.)			$ -	
62		Mounting Hardware			$ -	
63		Device Mounting and Installation Labor			$ -	
		Two Piece Units (Quantity 51-150)				
64		Computers (CPU, Display, Power Supply, Memory, etc.)			$ -	
65		Mounting Hardware			$ -	
66		Device Mounting and Installation Labor			$ -	
		Two Piece Units (Quantity 151-250)				
67		Computers (CPU, Display, Power Supply, Memory, etc.)			$ -	
68		Mounting Hardware			$ -	
69		Device Mounting and Installation Labor			$ -	
		Three Piece Units (Quantity 1-50)				
70		Computers (CPU, Display, Power Supply, Memory, etc.)			$ -	
71		Mounting Hardware			$ -	
72		Device Mounting and Installation Labor			$ -	
		Three Piece Units (Quantity 51-150)				
73		Computers (CPU, Display, Power Supply, Memory, etc.)			$ -	
74		Mounting Hardware			$ -	
75		Device Mounting and Installation Labor			$ -	
		Three Piece Units (Quantity 151-250)				
76		Computers (CPU, Display, Power Supply, Memory, etc.)			$ -	
77		Mounting Hardware			$ -	
78		Device Mounting and Installation Labor			$ -	
		RF Infrastructure				
79		Network Controller			$ -	
79a		Optional Maricopa County Add-On Network Controller			$ -	
80		Base Station			$ -	
80a		Optional Maricopa County Add-On Base Station			$ -	
81		Antenna			$ -	
81a		Optional Maricopa County Add-On Base Antenna			$ -	
82		Controller Installation			$ -	
83		Base Station Installation			$ -	
83a		Optional Maricopa County Add-On Base Station Installation			$ -	
		System Interfaces				

84		Alphanumeric Paging			$ -	
85		Arizona Law Enforcement Telecommunications System (ACJIS)			$ -	
86		Automatic Vehicle Location (AVL) Interface (Optional)				$ -
87		CAD to RMS Interface			$ -	
		E 9-1-1 Telephone System Interface				
88		Phoenix Dispatch Center			$ -	
89		Tucson Dispatch Center			$ -	
90		Flagstaff Dispatch Center (Optional)				$ -
91		Geographic Information System Interface			$ -	
		Local Network				
92		Phoenix Dispatch Center			$ -	
93		Tucson Dispatch Center			$ -	
94		Flagstaff Dispatch Center (Optional)				$ -
95		Mainframe Applications			$ -	
96		Mobile Data Computer System -- Dispatch/CAD System Interface			$ -	
97		Mobile Data Computer System -- Automatic Vehicle Location (Optional)				$ -
98		Other CAD Systems				$ -
99		Voice Radio System			$ -	
100		TDD Interface			$ -	
101		Time Synchronization Device Interface			$ -	
102		Optional Maricopa County Data Link Interface			$ -	
		Training				
		Call Taker/Dispatcher Training				
102		Phoenix Dispatch Center			$ -	
103		Tucson Dispatch Center			$ -	
104		Flagstaff Dispatch Center (Optional)				$ -
		Dispatch Supervisor Training				
105		Phoenix Dispatch Center			$ -	
106		Tucson Dispatch Center			$ -	
107		Flagstaff Dispatch Center (Optional)				$ -
		CAD Report Analysts				
108		Phoenix Dispatch Center			$ -	
109		Tucson Dispatch Center			$ -	
110		Flagstaff Dispatch Center (Optional)				$ -
		CAD System Administrators				
111		Phoenix Dispatch Center			$ -	
112		Tucson Dispatch Center			$ -	
113		Flagstaff Dispatch Center (Optional)				$ -
		Clerical Staff				

114		Phoenix Dispatch Center			$ -	
115		Tucson Dispatch Center			$ -	
116		Flagstaff Dispatch Center (Optional)				$ -
117		Mobile Data Computer System Administrators			$ -	
118		Mobile Data Computer RF Network Maintenance			$ -	
		Mobile Data Computer "Train-the-Trainer" Training				
119		Phoenix Officers			$ -	
120		Tucson Officers			$ -	
121		Flagstaff Officers (Optional)				$ -
		Acceptance Testing				
		Functional Testing				
122		Phoenix Dispatch Center			$ -	
123		Tucson Dispatch Center			$ -	
124		Flagstaff Dispatch Center (Optional)				$ -
		Throughput Testing				
124		Phoenix Dispatch Center			$ -	
125		Tucson Dispatch Center			$ -	
126		Flagstaff Dispatch Center (Optional)				$ -
		Reliability Testing				
126		Phoenix Dispatch Center			$ -	
127		Tucson Dispatch Center			$ -	
128		Flagstaff Dispatch Center (Optional)				$ -
129		System Documentation Hard/Soft Copies (As-builts, Manuals, etc.)			$ -	
		Project Management				
		CAD System Project Management				
130		Phoenix Dispatch Center			$ -	
131		Tucson Dispatch Center			$ -	
132		Flagstaff Dispatch Center (Optional)				$ -
133		Mobile Data Computer System Project Management			$ -	
134		Project Related Travel Expenses				
		CAD Not to Exceed Travel Expenses				
134		Phoenix Dispatch Center			$ -	
135		Tucson Dispatch Center			$ -	
136		Flagstaff Dispatch Center (Optional)				$ -
		MDCS not to exceed travel expenses				
136		Phoenix Dispatch Center			$ -	
137		Tucson Dispatch Center			$ -	
138		Flagstaff Dispatch Center (Optional)				$ -
		Warranty and Shipping				

		12-Month System Warranty (H/W, S/W, and Services)				
139		CAD System Warranty			$ -	
140		Mobile Data Computer System Warranty			$ -	
		Equipment Shipping				
		CAD Equipments Shipping				
141		Phoenix Dispatch Center			$ -	
142		Tucson Dispatch Center			$ -	
143		Flagstaff Dispatch Center (Optional)				$ -
144		Mobile Data Computer System Equipment Shipping			$ -	
	Additional Items (Specify RFP Section #) or Details from Above (Specify line item #)					
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153						
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169						
170						
		Subtotal				
		State of Arizona Tax				
		Requirements Total				
		Optional Purchase S/W, H/W and services				
171		1-Year CAD Address Data Retention				$ -
172		18 Month CAD Address Data Retention				$ -
173		2-Year CAD Address Data Retention				$ -
174		Interface between CAD and HPBS mainframe duty roster				$ -

175		Degraded mode dispatch policies				$ -
176		Mainframe Interfaces -- Pick list maintenance				$ -

ITEM #	Catalog Number	Description	QTY	Unit Price	Extended Price
		Ongoing Maintenance Year 2			
177		Follow-On Maintenance			$ -
178		CAD System Server Maintenance			$ -
179		CAD System Workstation Maintenance			$ -
180		CAD System Software Maintenance			$ -
181		Mobile Data Computer System Server Maintenance			$ -
182		Mobile Data Computer RF System Maintenance			
183		Mobile Data Computer System - Vehicular Computer (One Piece) Maintenance			$ -
184		Mobile Data Computer System - Vehicular Computer (Two Piece) Maintenance			$ -
185		Mobile Data Computer System - Vehicular Computer (Three Piece) Maintenance			$ -
		Ongoing Maintenance Year 3			
186		Follow-On Maintenance			$ -
187		CAD System Server Maintenance			$ -
188		CAD System Workstation Maintenance			$ -
189		CAD System Software Maintenance			$ -
190		Mobile Data Computer System Server Maintenance			$ -
191		Mobile Data Computer RF System Maintenance			
192		Mobile Data Computer System - Vehicular Computer (One Piece) Maintenance			$ -
193		Mobile Data Computer System - Vehicular Computer (Two Piece) Maintenance			
194		Mobile Data Computer System - Vehicular Computer (Three Piece) Maintenance			$ -
		Ongoing Maintenance Year 4			
195		Follow-On Maintenance			$ -
196		CAD System Server Maintenance			$ -
197		CAD System Workstation Maintenance			$ -
198		CAD System Software Maintenance			$ -
199		Mobile Data Computer System Server Maintenance			$ -
200		Mobile Data Computer RF System Maintenance			
201		Mobile Data Computer System - Vehicular Computer (One Piece) Maintenance			$ -
202		Mobile Data Computer System - Vehicular Computer (Two Piece) Maintenance			
203		Mobile Data Computer System - Vehicular Computer (Three Piece) Maintenance			$ -
		Ongoing Maintenance Year 5			
204		Follow-On Maintenance			$ -
205		CAD System Server Maintenance			$ -
206		CAD System Workstation Maintenance			$ -
207		CAD System Software Maintenance			$ -
208		Mobile Data Computer System Server Maintenance			$ -
209		Mobile Data Computer RF System Maintenance			
210		Mobile Data Computer System - Vehicular Computer (One Piece) Maintenance			$ -
211		Mobile Data Computer System - Vehicular Computer (Two Piece) Maintenance			
212		Mobile Data Computer System - Vehicular Computer (Three Piece) Maintenance			$ -

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18. APPENDIX A – DEFINITION OF TERMS

This appendix is included in an effort to help reduce the confusion with the terms and acronyms used within this document. Many of these that re used in this document have multiple meanings depending upon the context and the agency using them. Every effort has been made to ensure that the use of these terms is consistent throughout the document. If an Offeror finds or believes to have found an inconsistency, they must bring this to the attention of the State for clarification or correction.

Term / Acronym	Description
A.A.C	Arizona Administrative Code; These codes (subject to the limitations and disclaimer found on the site) can be found on-line at http://www.sosaz.com/Rules_and_Regulations.htm.
A.R.S.	Arizona Revised Statutes; These statutes (subject to the limitations and disclaimer found on the site) can be found on-line at http://www.azleg.state.az.us/ars/ars.htm.
ACJIS	Arizona Criminal Justice Information System
ACJS	ACJIS Help System
ACPO	Arizona Computerized Protection Order System
ACSV	Arizona Computerized Stolen Vehicle System
ACWI	ACJIS Computerized Concealed Weapon Inquiry
ACWP	Arizona Computerized Wanted Persons System
ACWT	Arizona Concealed Weapon Tracking
ADA	Americans with Disabilities
ADABAS	Adaptable Data Management System
ADOT	Arizona Department of Transportation
ALI	Automatic Location Information
ANI	Automatic Number Identification
ANSI	American National Standards Institute, specific codes available at http://www.ansi.org/

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APCO	Association of Public Safety Communications Officials
APCO 36	Association of Public Safety Communications Officials standard, more information can be found at http://www.apco911.org/about/current_projects.html
ARSC	Arizona Revised Statutes Codes System
ASCII	American Standard Code for Information Interchange
ATF	Alcohol, Tobacco & Firearms (US Government)
Attachment	Means any item the Solicitation requires an Offeror to submit as part of the Offer.
AVL	Automatic Vehicle Location
AZHP	Arizona Department of Public Safety Highway Patrol
BADG	Badge/Name And Address List
Baudot	An encoding scheme used by hearing impaired persons to report emergencies.
BICSI	BICSI: A Telecommunications Association (Formerly; Building Industry Consulting Services, International) specific codes available at http://www.bicsi.org/
CAD	Computer Aided Dispatch
CD-ROM	Compact Disk - Read Only Memory
CICS	Customer Information Control System (IBM)
CID	Criminal Investigation Division
Contract	Means the combination of the Solicitation, including the Uniform and Special Instructions to Offerors, the Uniform and Special Terms and Conditions, and the Specifications and Statement or Scope of Work; the Offer and any Best and Final Offers; and any Solicitation Amendments or Contract Amendments; and any terms applied by law.
Contract Amendment	Means a written document signed by the Procurement Officer that is issued for the purpose of making changes in the Contract.

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Contractor	Same as Offeror.
COTS	Commercial Off The Shelf
CPSR	Convicted Persons on Supervised Release
DART	Department Automated Report Tracking System
Days	Means calendar days unless otherwise specified.
DB2	Database 2 (IBM)
DLBI	Drivers License Browse Inquiry System
DPS	State of Arizona Department of Public Safety
DTMF	Dual Tone Multi-Frequency
DUI	Driving Under the Influence
EIA	Electronic Industries Alliance (formerly Electronic Industries Association, changed in 1997) specific codes available at http://www.eia.org/
EMED	Emergency Medical Services Communication System
EMI	Electromagnetic Interference
EMS	Emergency Medical Services
EMSA	Emergency Medical Services Agency
EMSCOM	Emergency Medical System Communications
ESRI	Environmental Systems Research Institute
Exhibit	Means any item labeled as an Exhibit in the Solicitation or placed in the Exhibits section of the Solicitation
F.O.B.	Free On Board; delivered by the Offeror without hidden or additional charges beyond those clearly stated in the Price Sheet.
FAA	Federal Aviation Administration (US government) http://www.faa.gov/
FBI	Federal Bureau of Investigation (US government)

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FBR	Field Based Reporting
FCC	Federal Communications Commission (US Government) specific codes available at http://wireless.fcc.gov/
FEC	Forward Error Correction
FHMA	ADOT mile marker database
FI	Field Interview
GB	Giga-Byte (1024 megabytes)
GHz	GigaHertz
GIS	Geographic Information System
GITEM	Gang Intelligence Team Enforcement Mission
GPS	Global Positioning Satellite
Gratuity	Means a payment, loan, subscription, advance, deposit of money, services, or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value is received.
GUI	Graphical User Interface
HAZMAT	Hazardous Materials
HPBS	Highway Patrol Bureau Scheduling
IMS	Internet Mapping Service
IRS	Internal Revenue Service
JOLT	Juvenile Online Tracking System
KALL	Call Sign Table
KB	KiloByte; 1024 Bytes
LAN	Local Area Network
MB	Megabyte 1,000,000 Bytes

2102 West Encanto Blvd.
Phoenix, Arizona 85009
(602) 223-2405

MDC	Mobile Data Computer
MDCS	Mobile Data Computer System
MDT	Mobile Data Terminal
MIS	Management Information System
MQ	Message Queueing (IBM)
MQSI	MQ Series Integrator (message broker)
MSAG	Master Street Address Guide
MTBF	Mean Time Between Failures
MVD	Motor Vehicle Division
NAD	North American Datum
NAD 83	North American Datum, revised as of 1983
NCIC	National Crime Information Center
NCIC-2000	National Crime Information Center 2000 standards
NCMP	NCIC Missing Persons File
NCPO	NCIC Protection Order File
NCSA	NCIC Stolen Article File
NCSB	NCIC Stolen Boat File
NCSG	NCIC Stolen/Recovered/Lost Gun File
NCSS	NCIC Stolen Securities File
NCUP	NCIC Unidentified Persons File
NEC	National Electrical Code, specific codes available at http://www.nfpa.org
NEMA	National Electrical Manufacturers Association; http://www.nema.org/

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Phoenix, Arizona 85009
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NIBRS	National Incident Based Reporting System
NICB	National Insurance Crime Bureau
NLETS	National Law Enforcement Telecommunications System
NLTO	NLETS Other Subsystem
NLTV	NLETS Vehicles/Hot Files Subsystem
Notice to Proceed	A written notice from the Procurement Officer or their designee authorizing the Offeror to begin work.
NTC	National Tracing Center (NTF)
ODBC	Open Data Base Connectivity
Offer	Means bid, proposal or quotation
Offeror	Means a vendor who responds to a Solicitation
OPCOMM	Arizona Department Of Public Safety Operations Communications Section
ORI	Originating Agency Identifier (Nine digit code)
OS	Operating System
PC	Personal Computer
PDEP	Personnel Deployment System
PDF	Portable Document Format (Adobe Acrobat)
PERS/PHON	Personnel Information System
Price Sheet	Means the Offeror's completed version of the pricing template provided as part of this Solicitation.
Procurement Officer	Means the person duly authorized by the State to enter into and administer Contracts and make written determinations with respect to the Contract or his or her designee.
Project Manager	Shall be the States single point of contact for all project related activities once the Contract is signed. This individual shall have the authority to make written determinations with respect to

	contractual, financial, technical, etc. decisions on behalf of the Offeror and any of their subcontractors.
PSAP	Public Safety Answering Point
QWERTY	Industry standard for key placement on Keyboard
RAID	Redundant Array of Inexpensive Disk
RF	Radio Frequency
RFP	Request for Proposals
SDRAM	Synchronous Dynamic Random Access Memory
SIRS	Statistical Information Retrieval System
Solicitation	Means an Invitation for Bids ("IFB"), a Request for Proposals ("RFP"), or a Request for Quotations ("RFQ").
Solicitation Amendment	Means a written document that is authorized by the Procurement Officer and issued for the purpose of making changes to the Solicitation.
State	Means the State of Arizona and Department or Agency of the State that executes the Contract.
Subcontract	Means any Contract, express or implied, between the Offeror and another party or between a subcontractor and another party delegating or assigning, in whole or in part, the making or furnishing of any material or any service required for the performance of the Contract.
TABL	Criminal Investigations Table System
TDD	Telecommunication Device for the Deaf
TIA	Telecommunications Industry Association, specific codes available at http://www.tiaonline.org/
TMD	Tactical Map Display
UN	United Nations
VGTO	NCIC Violent Gang and Terrorist Organization File

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Phoenix, Arizona 85
(602) 223-2405

VIN	Vehicle Identification Number
VPN	Virtual Private Network
VREG	Vehicle Registration System
VTI	Vehicle Theft Interdiction
WAN	Wide Area Network
WWVB	Is a radio station operated by the National Institute of Standards and Technology located in Fort Collins, Colorado. The station broadcast time codes
E9-1-1	Enhanced 9-1-1
10-27	Drivers License Inquiry; also referred to as 27.
10-28	Vehicle Registration Inquiry; also referred to as 28.

ARIZONA DEPARTMENT OF PUBLIC SAFETY
CONTRACT AMENDMENT

Finance Section – Mail Drop 1330
P.O. Box 6638
Phoenix, Az 85005-6638
(602) 223-2451
Fax (602) 223-2944

CONTRACT NO. L3-013-001

AMENDMENT NO. 3

In accordance with the Special Terms and Conditions, Paragraph 6.13 of the above referenced contract for MOBILE DATA COMPUTERS/COMPUTER AIDED DISPATCH SYSTEM, the Arizona Department of Public Safety wishes to extend the contract with Northrop Grumman Public Safety, Inc. as follows:

The contract period shall be extended from May 22, 2006 through May 21, 2007

Pricing shall be revised as follows:

B) Mobile System & RF Infrastructure

Mobile Hardware & COTS (See notes below on processing fee)

One Piece Mobile

Panasonic Touchbook 29 $4,189
Pentium M 778 1.6G LV(Centrino),13.3 Touch XGA,512MB,80GB, 802.11a/b/g, WinXP SP2, Rubber Backlit Keyboard, TPM1.2

Panasonic Touchbook 29 $4,189
Pentium M 778 1.6G LV(Centrino),13.3 Touch XGA,512MB,80GB, 802.11a/b/g, WinXP SP2, Emissive Backlit Keyboard, TPM1.2

Panasonic Touchbook 29 $3,900
Pentium M 778 1.6G LV(Centrino),13.3 Touch XGA,512MB,80GB, 802.11a/b/g, WinXP SP2, TPM1.2

Panasonic Touchbook 29 $3,450
Pentium M 778 1.6G LV(Centrino),13.3 NON Touch XGA,256MB,60GB, 802.11a/b/g, WinXP SP2, TPM1.2

Docking Station $984

Two Piece Mobile

Panasonic Toughbook 18 $3,525
Pentium M 753 1.2GHz ULV, Sonoma(915GMX), 10.4" Touch Screen XGA, 60GB HDD, 512MB RAM, 802.11a/b/g, Dual pass through antenna connector, WIN XP SP2, TPM1.2

Docking Station $984

Three Piece Mobile

Panasonic Touchbook 29 (for PDRC) $3,450
Pentium M 778 1.6G LV(Centrino),13.3 NON Touch XGA,256MB,60GB, 802.11a/b/g, WinXP SP2, TPM1.2

12.1" PDRC Screen, Backlit Keyboard $2,427

ARIZONA DEPARTMENT OF PUBLIC SAFETY
CONTRACT AMENDMENT

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Fax (602) 223-2944

CONTRACT NO. L3-013-001

AMENDMENT NO. 3

Docking Station	$984
43.2 kbps GeminiPD+Modem (800 Mhz, 25 Khz) W/GPS	$2,444
43.2 Kbps GeminiPD+ Modem (800 Mhz, 25 Khz) w/ GPS	$2,722
TX/RX Systems Inc. equipment below are replacements	
Duplexer, 800/900 MHz, 45 MHz min sep***	$1,083
Bandpass Filter, 806-960 MHz***	$209
Bandpass Filter Panel Mount Kit***	$34
Bandpass Filter Reverse Flush Mount Kit***	$39
2 - BNC (M) to N (F) Adapters***	$24
Mobile Antenna equipment available, below are replacements	
GPS Combo Antenna Assembly ***	$135
NMO Antenna Mount with Mini-UHF Connector***	$15
3 dB, 806-866 MHz, Black Base, Colinear/Closed Antenna with Spring***	$36

AVL System

AVL System Services

CAD Modifications	Removed

Time and Material Rates

	Calendar Year 2006	Calendar Year 2007
Project Manager	$226	$237
Technical Director	$215	$226
Database Analyst	$226	$237
Principle Engineer I	$218	$229
Principle Engineer II	$204	$214
Senior Engineer	$193	$203
Engineer I	$182	$191
Engineer II	$140	$147
Trainer	$187	$197

Additional CommandPoint License Fees

The following rates are applicable to any systems purchased under this contract that are not a part of the initial purchase. These are license prices only, and do not include any hardware, implementation services, training, warranty or maintenance.

ARIZONA DEPARTMENT OF PUBLIC SAFETY
CONTRACT AMENDMENT

Finance Section – Mail Drop 1330
P.O. Box 6638
Phoenix, Az 85005-6638
(602) 223-2451
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CONTRACT NO. L3-013-001

AMENDMENT NO. 3

Installation services will be provided at the listed T&M rates, contact NG for an estimate of required services.

4. CommandPoint Mobile Licenses

Number	Price, Each
1 - 9	$400
10 - 19	$380
20 - 29	$360
30 - 39	$340
40 - 49	$320
50 - 75	$300
75 - 99	$280
100 - 149	$260
150 - 199	$240
200 - 249	$220
250 - 299	$200
300 - 399	$180
400 +	$160

5. PCMSS GUI Upgrade Licenses (for clients with existing PCMSS licences)

Number	Price, Each
1 - 10	$200
11 - 25	$180
25 - 50	$160
51 - 200	$140
200 +	$100

6. CAD Web Monitor

Server License	$20,000
Per Seat Client Licenses	$100

CAD Software

Server Licence	$82,500
Workstation PCMSS Licenses	See Below

ARIZONA DEPARTMENT OF PUBLIC SAFETY
CONTRACT AMENDMENT

Finance Section – Mail Drop 1330
P.O. Box 6638
Phoenix, Az 85005-6638
(602) 223-2451
Fax (602) 223-2944

CONTRACT NO. L3-013-001

AMENDMENT NO. 3

PCMSS License Fee Schedule				
From	To	Lic. Fee	If You Need...	Then You Should Buy...
1	9	$400		
10	19	$380	19 - 19	20
20	29	$360	29 - 29	30
30	39	$340	38 - 39	40
40	49	$320	47 - 49	50
50	74	$300	70 - 74	75
76	99	$280	93 - 99	100
100	149	$260	139 - 149	150
150	199	$240	184 - 199	200
200	249	$220	228 - 249	250
250	299	$200	270 - 299	300
300	399	$180	356 - 399	400
400	499	$160	438 - 499	500
500	7	$140		

All other provisions of the Contract shall remain in their entirety.

PLEASE SIGN, DATE AND RETURN THIS CONTRACT AMENDMENT TO:

Arizona Department of Public Safety
Margaret Hetrick – Procurement Specialist
Finance Section – Mail Drop 1330
P.O. Box 6638
Phoenix, AZ 85005-6638

Signed contract amendment may be faxed to **(602) 223-2944.**

Vendor hereby acknowledges receipt and understanding of above amendment.

John C. Kouri 8/16/06
Signature Date

John C. Kouri Contracts Manager
Typed Name and Title

Northrop Grumman Information Technology Inc
Name of Company

The above referenced Contract Amendment is hereby executed this

16 Day of August, 2006, at Phoenix, Arizona.

Lu E. Himmelstein
Lu E. Himmelstein, Chief Procurement Officer

TOTAL P.05

TOTAL P.05

Arizona DPS Year 3 Contract Pricing Detail

A) CAD System

CAD Hardware & COTS (See notes below on processing fee)

CAD Server System Hardware and OS	$175,547
Netclock	$2,656
Terminal Servers and Modems	$2,474
Workstations	
CAD Call Taker Workstation	$2,482
CAD Dispatch Workstation	$2,971
CAD Admin Worstaiton	$1,992
Printer	$1,371
GDI Tools Workstation (needed for Mapping)	$1,992

The following rates are applicable to any systems purchased under this contract that are not a part of the initial purchase. These are license prices only, and do not include any hardware, implementation services, training, warranty or maintenance. Installation services will be provided at the listed T&M rates, contact NG for an estimate of required services.

CAD Software

Server Licence	$82,500
Workstation PCMSS Licenses	See Below

PCMSS License Fee Schedule				
From	To	Lic. Fee	If You Need...	Then You Should Buy...
1	9	$400		
10	19	$380	19 - 19	20
20	29	$360	29 - 29	30
30	39	$340	38 - 39	40
40	49	$320	47 - 49	50
50	74	$300	70 - 74	75
75	99	$280	93 - 99	100
100	149	$260	139 - 149	150
150	199	$240	184 - 199	200
200	249	$220	228 - 249	250
250	299	$200	270 - 299	300
300	399	$180	356 - 399	400
400	499	$160	438 - 499	500
500	?	$140		

Arizona DPS Year 3 Contract Pricing Detail

B) Mobile System & RF Infrastructure

Mobile Hardware & COTS (See notes below on processing fee)

One Piece Mobile	
Panasonic Touchbook 29 Pentium M 738-1.4G LV (Centrino), 13.3" Transmissive Touch XGA, 256MB, 60GB, WLAN 802.11a+b+g, WinXP SP2, Rubber Backlit Keyboard	$4,107
Panasonic Touchbook 29 Pentium M 738-1.4G LV (Centrino), 13.3" Transmissive Touch XGA, 256MB, 60GB, WLAN 802.11a+b+g, WinXP SP2, Emissive Chiclet Backlit Keyboard	$4,107
Panasonic Touchbook 29 Pentium M 738-1.4G LV (Centrino), 13.3" Transmissive Touch XGA, 256MB, 60GB, WLAN 802.11a+b+g, WinXP SP2	$3,845
Panasonic Touchbook 29 Pentium M 738-1.4G LV (Centrino), 13.3" Transmissive XGA, 256MB, 60GB, WLAN 802.11a+b+g, WinXP SP2	$3,450
Docking Station	$862
Two Piece Mobile	
Panasonic Toughbook 18 Pentium M 101Ghz (Centrino), 10.4" Hi-bright Transmissive XGA, 40GB, 256MB, WLAN802.11b+g, Dual pass through antenna WinXP	$3,284
Docking Station	$862
Three Piece Mobile	
Panasonic Touchbook 29 (for PDRC) Pentium M 738-1.4G LV (Centrino), 13.3" Transmissive XGA, 256MB, 60GB, WLAN 802.11a+b+g, WinXP SP2	$3,450
12.1" PDRC Screen, Backlit Keyboard	$2,107
Docking Station	$862
43.2 Kbps GeminiPD+ Modem (800 Mhz, 25 Khz) w/ GPS	$2,849
43.2 Kbps GeminiPD+ Modem (800 Mhz, 25 Khz) WO/ GPS	$2,509
Triple DES Encryption*	$337
DRIP Software Maintenance (2 yr)*	$93
Triple DES Encryption Software Maintenance (2 Yr)*	$113
MDWD with expansion base with finger print scanner $ mag stripe reader	$2,189

* Required with purchase of GeminiPD+ Modem

Arizona DPS Year 3 Contract Pricing Detail

RF Infrastructure Hardware & COTS (See notes below on processing fee)

Analog Modem Equipment	
Analog modem equipment below is available as long as DataRadio can procure it from supplier	
RM16M Data Shelf, Model 27, lease/dial, 115 VAC	$2,007
Modem card f/Model 27 Data Shelf	$954
4-Wire Leased Line Modem	$982
Modem Rack Mount	$174
43.2 Kbps ParagonPD+ Base (800 Mhz, 25 Khz) No installation services	$17,010
Power Supply Rear Support Bracket	$63
BDLC to Leased-line DCE Cable	$57
Rack Mount AC Surge Protector	$149
Programming Kit for Paragon	$284
16 Port Multi-Site Controller without installation	$45,360
16 Port Multi-Site Controller with installation	$51,937
70" DR IP Server/MSC Cabinet	$2,506
Rack Mount Keyboard	$311
Wireless Gateway (IP) Server without installation	$22,680
Wireless Gateway (IP) Server with installation	$29,257
Antenna Mount with Mini-UHF Connector	No Longer Offered*
3 dB Gain Mobile Antenna, 806-866 MHz	No Longer Offered**
GPS Antenna Assembly w/ 8' Cable	$162
Dataradio IP Mobile Software License ordered with new radio modem	$0
Dataradio IP Mobile Software License added to an existing radio modem	$306
Programming Kit for GeminiPD	$170
Smart 16 Shelf w/ single-feed AC - 16 cards	$1,995
DSU III AR Plug-In Modem Card	$647
DSU III AR Digital Stand-alone Modem	$696
19" Rack Mount Shelf f/ 2 stand-alone digital modems	$221

* NMO Antenna Mount with Mini-UHF Connector offered in lieu of this line item.

** 3 dB, 806-866 MHz, Black Base, Colinear/Closed Antenna with Spring offered in lieu of this line item.

Arizona DPS Year 3 Contract Pricing Detail

TX/RX Systems Inc. equipment below are replacements:	
Duplexer, 800/900 MHz, 45 MHz min sep	$1,083
Bandpass Filter, 806-960 MHz	$209
Bandpass Filter Panel Mount Kit	$34
Bandpass Filter Reverse Flush Mount Kit	$39
2 - BNC (M) to N (F) Adapters	$24

Mobile Antenna equipment available, below are replacements:	
GPS Combo Antenna Assembly	$135
NMO Antenna Mount with Mini-UHF Connector	$15
3 dB, 806-866 MHz, Black Base, Colinear/Closed Antenna with Spring	$36

Order Processing Fee, Freight and Taxes

The following order processing fee will be charged for each hardware only order.

Hardware Processing Fee	$384

Any freight charges and/or applicable taxes will be added to invoices for hardware.

Arizona DPS Year 3 Contract Pricing Detail

OPTIONS

Any options desired that are not priced can be quoted based on provided specifications at a fixed price or can be accomplished using the provisions of the Time and Materials rates listed below.

AVL System

AVL System Services

CAD Modifications	$193,202

Time and Material Rates

	Calendar Year 2005	Calendar Year 2006
Project Manager	$215	$226
Technical Director	$205	$215
Database Analyst	$215	$226
Principle Engineer I	$208	$218
Principle Engineer II	$194	$204
Senior Engineer	$184	$193
Engineer I	$173	$182
Engineer II	$133	$140
Trainer	$179	$187

Any expenses, including travel and per diem, as well as materials, will be billed at actual cost, plus 18.5%. Discounts, in accordance with existing published commercial rates may apply, but shall not exceed the above rates.

Additional CommandPoint Mobile Client License Fees

The following rates are applicable to any systems purchased under this contract that are not a part of the initial purchase. These are license prices only, and do not include any hardware, implementation services, training, warranty or maintenance. Installation services will be provided at the listed T&M rates, contact NG for an estimate of required services.

1. CommandPoint Police Records Management
   Server License $78,375
   Per Seat Client Licenses

Number	Price, Each
1 - 10	$500
11 - 25	$400
26 +	$300

1a. CommandPoint AFR
   Server License $35,000
   Per Seat Client Licenses $495

Arizona DPS Year 3 Contract Pricing Detail

2. CommandPoint Fire Records Management

Server License - Up to 2 Stations $42,955

Per Station Licenses

Number	Price, Each
3	$9,865
4	$8,676
5	$7,615
6+	Inquire

3. CommandPoint Jail RMS

Server License $30,000

Per Seat Client Licenses

Number	Price, Each
1 - 10	$500
11 - 25	$400
26 +	$300

4. CommandPoint Mobile Licenses

Number	Price, Each
1 - 9	$400
10 - 19	$380
20 - 29	$360
30 - 39	$340
40 - 49	$320
50 - 75	$300
75 - 99	$280
100 - 149	$260
150 - 199	$240
200 - 249	$220
250 - 299	$200
300 - 399	$180
400 +	$160

5. PCMSS GUI Upgrade Licenses (for clients with existing PCMSS licences)

Number	Price, Each
1 - 10	$200
11 - 25	$180
25 - 50	$160
51 - 200	$140
200 +	$100

6. CAD Web Monitor

Server License $20,000

Per Seat Client Licenses $100